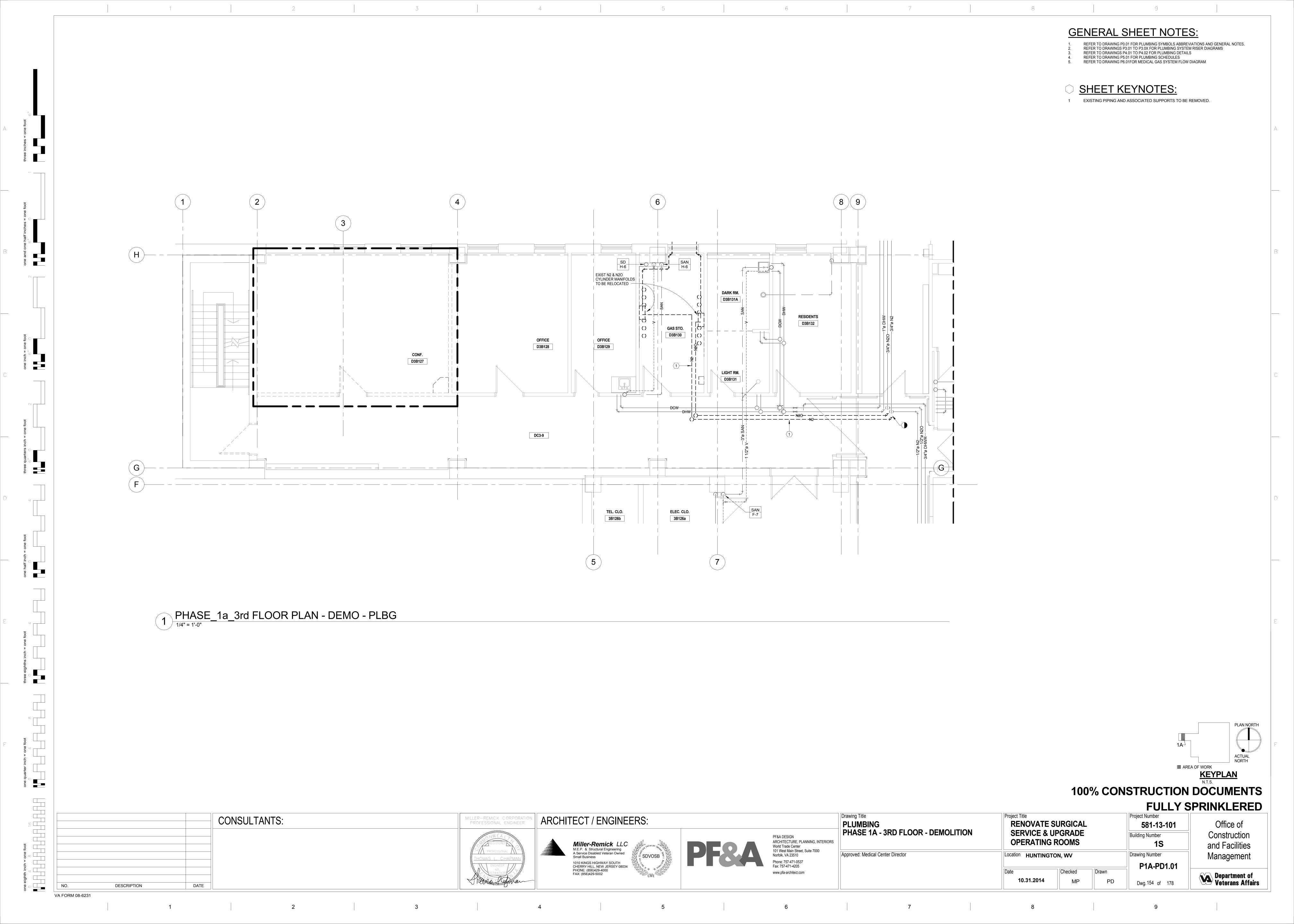
PLUMBING ABBREVIATIONS PLUMBING PIPING SYMBOLS GENERAL PLUMBING SYMBOLS **GENERAL NOTES** A/E - ARCHITECT / ENGINEER L/S - LITER PER SECOND EXISTING TO REMAIN AD - AREA DRAIN LA - LABORATORY AIR DIRECTION OF PIPE PITCH (DOWN) <u>GENERAL</u> AFF - ABOVE FINISH FLOOR LAV - LAVATORY EXISTING TO BE REMOVED AFG - ABOVE FINISH GRADE LBS/HR - POUNDS PER HOUR _____ DIRECTION OF FLOW 1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, INVERTS, PIPE SIZES AND LCW - LABORATORY COLD WATER AG - AIR GAP MATERIALS, FLUID FLOW DIRECTION(S) AND CONDITIONS AT THE SITE AND REPORT ANY AP - ACCESS PANEL DOMESTIC COLD WATER, COLD WATER LHW - LABORATORY HOT WATER ANCHOR DISCREPANCIES TO THE ENGINEER PRIOR TO BEGINNING INSTALLATION OR FABRICATION AS - AUTOMATIC SPRINKLER LHWR - LABORATORY HOT WATER RETURN WORK. (DO NOT SCALE DRAWINGS). ASD - ADJUSTABLE SPEED DRIVES DOMESTIC HOT WATER. HOT WATER ING - LIQUID NATURAL GAS REDUCER OR INCREASER ASD - AUTOMATIC SPRINKLER DRAIN LOX - LIQUID OXYGEN 2. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES EVEN IF THE ASHRAE - AMERICAN SOCIETY HEATING, LV - LABORATORY VACUUM DOMESTIC HOW WATER RETURN, HOT WATER RETURN DHWR DHWR ECCENTRIC REDUCER UTILITIES ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL REPAIR ALL REFRIGERATION, AIR CONDITIONING ENGINEERS LW - LABORATORY WASTE DAMAGES AT THEIR OWN EXPENSE AND WILL BE RESPONSIBLE FOR ANY ADDITIONAL ASME - AMERICAN SOCIETY MECHANICAL ENGINEERS LWV - LABORATORY WASTE VENT MEDICAL AIR — MA — MA — TOP CONNECTION, 45° OR 90° DAMAGES CAUSED BY A SYSTEM BEING DOWN. ASPE - AMERICAN SOCIETY PLUMBING ENGINEERS ASR - AUTOMATIC SPRINKLER RISER COMPRESSED AIR — CA — CA — BOTTOM CONNECTION, 45° OR 90° 3. THIS INSTALLATION WILL CONFORM TO ALL CODES AND THE REQUIREMENTS OF FEDERAL, AV - ACID VENT M - METER AW - ACID WASTE STATE, AND LOCAL REGULATORY AGENCIES HAVING JURISDICTION. MEDICAL VACUUM — MV — MV — MA - MEDICAL AIR SIDE CONNECTION 4. INSTALL ALL PRODUCTS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, MAV - MANUAL AIR VENT CONTRACT DOCUMENTS AND THE APPLICABLE CODES, STANDARDS AND REGULATIONS. LABORATORY AIR MBH - 1000 BTUH — LA ——— LA — CAPPED OUTLET MED - MEDICAL BFP - PRESSURE BACKFLOW PREVENTER 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR ENSURING THAT ALL RULES AND MER - MECHANICAL EQUIPMENT ROOM LABORATORY VACUUM RISE OR DROP IN PIPE **BHP - BREAK HORSEPOWER** REGULATIONS, INCLUDING THOSE WHICH MAY BE ISSUED BY THE OWNER, ARE BEING MH - MANHOLE BSP - BLACK STEEL PIPE OBSERVED, PARTICULARLY WORKPLACE SAFETY AND THE CONDUCT OF ALL THOSE MOU - MEMORANDUM OF UNDERSTADING INDUSTRIAL AIR --- IA ----- IA ---BT - BATHTUB EMPLOYED DIRECTLY AND INDIRECTLY BY HIM ON THE PREMISES, AND THE OWNER'S MSB - MOP SERVICE BASIN BTU - BRITISH THERMAL UNIT EMPLOYEES WHO MAY BE IMPACTED OR AFFECTED BY CONSTRUCTION ACTIVITIES. THE MV - MEDICAL VACUUM BTUH - BRITISH THERMAL UNIT PER HOUR CONTRACTOR WILL INSTALL SIGNAGE, TEMPORARY FENCES, BARRIERS, AND OTHER MEANS TO PROVIDE WARNING AND PERSONNEL SAFETY. PLACEMENT OF THESE ITEMS WILL BE SANITARY SEWER PIPE DOWN COORDINATED WITH THE OWNER AND HIS ONGOING OPERATIONS AND WILL PROMPTLY BE (N) - NEW, NEW WORK C - CELSIUS REVISED WHEN WORK IN A PARTICULAR AREA HAS BEEN COMPLETED. SANITARY SEWER (OPTIONAL) POINT OF CONNECTION TO EXISTING WORK CGA - COMPRESSED GAS ASSOCIATION N2 - NITROGEN N2O - NITROUS OXIDE CI - CAST IRON 6. ALL WORK WILL BE LAWFULLY EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND WILL BE SANITARY SEWER, BELOW GRADE CO - CLEANOUT NC - NORMALLY CLOSED ——SAN—————SAN—— LIMIT OF DEMOLITION DONE IN ACCORDANCE WITH THE GOVERNING CODES, INDUSTRY STANDARDS AND IN NG - NATURAL GAS CS - CLINICAL SINK CONFORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS. SANITARY VENT CV - CONTROL VALVE NIC - NOT IN CONTRACT -----STRAINER NO - NORMALLY OPEN 7. WORK UNDER THIS CONTRACT SHALL CONSIST OF THE CONTRACTOR PROVIDING ALL LABOR, NOM - NOMINAL STORM WATER — SD — SD — THERMOMETER NPW - NON POTABLE WATER MATERIALS, AND SERVICES, INCLUDING WORK NOT SPECIFICALLY SHOWN BUT REASONABLY (D) - DEMOLISH AND REMOVE NTC - NOT TO SCALE STORM WATER, BELOW GRADE — SD — — SD — DCW - DOMESTIC COLD WATER PRESSURE GAGE DHW - DOMESTIC HOT WATER PERIMETER OR UNDERSLAB DRAIN TILE 8. WORK ALL DRAWINGS WITH THE PROJECT SPECIFICATIONS. DHWR - DOMESTIC HOT WATER RETURN — DT — — DT — ——FE—— FLOW ELEMENT DHWS - DOMESTIC HOT WATER SUPPLY O2 - OXYGEN SOFTEN COLD WATER 9. PIPING SHOWN ON RESPECTIVE PLANS SERVES FIXTURES AND EQUIPMENT ON THAT FLOOR DI - DEIONIZED WATER OC - ON CENTER co **O**—— CLEAN OUT DN - DOWN UNLESS OTHERWISE NOTED. **OD - OUTSIDE DIAMETER** DOE - DEPARTMENT OF ENERGY FILTERED COLD WATER OFD - OVERFLOW DRAIN HOSE BIB DS - DOWNSPOUT OR - OPERATING ROOM 10. PIPING RISING WITHIN A STORY IS DESIGNATED AS "RISE". PIPING RISING TO ANOTHER STORY DT - DRAIN TILE REVERSE OSMOSIS WATER SUPPLY IS NOTED AS "UP". PIPING DROPPING WITHIN A STORY IS NOTED AS "DROP". PIPING OVFL - OVERFLOW DW - DISHWASHER DROPPING TO ANOTHER STORY IS NOTED AS "DN". DWG - DRAWING REVERSE OSMOSIS WATER RETURN **DWH - DOMESTIC WATER HEATER** 11. COMPLETE LAYOUT DRAWINGS SHALL BE REQUIRED BY SPECIFICATIONS PARAGRAPH. PA - PASCAL **DWR - DRINKING WATER RETURN** TEMPERED WATER SUPPLY PD - PRESSURE DROP OR DIFFERENCE SUBMITTALS. CONSTRUCTION WORK SHALL NOT START ON ANY SYSTEM UNTIL THE LAYOUT **DWS - DRINKING WATER SUPPLY** PDI - PLUMBING AND DRAINAGE INSTITUTE DRAWINGS HAVE BEEN APPROVED. DWV - DRAIN WASTE VENT PG - PRESSURE GAGE TEMPERED WATER RETURN PP - PLUMBING PUMP PPM - PARTS PER MILLION NITROUS OXIDE — N2O — N2O — PLUMBING NOTES PRS - PRESSURE REDUCING STATION (E) - EXISTING TO REMAIN PRV - PRESSURE REDUCING VALVE ____ 02 _____ 02 ____ 1. ALL PIPING MATERIALS AND COMPONENTS INCLUDING FITTINGS, PIPE, FLANGES, VALVES, ETC. EL - ELEVATION PSI - POUNDS PER SQUARE INCH **EMCS - ENERGY MONOSERRAT AND CENTRAL** SHALL BE DESIGNATED, FABRICATED AND INSTALLED PER THE APPROPRIATE SECTIONS OF PSIA - POUNDS PER SQUARE INCH ATMOSPHERE NITROGEN — N2 — N2 — THE LATEST CODES, VETERAN'S AFFAIRS PLUMBING STANDARDS AND PROJECT CONTRACT PSIG - POUNDS PER SQUARE INCH GAUGE EPA - ENVIROMENTAL PROTECTION AGENCY DOCUMENTS. PTRV - PRESSURE TEMPERATURE RELIEF VALVE EPACT - ENERGY POLICY ACT LIQUEFIED PETROLEUM (LP) GAS —LPG——LPG— PW - POTABLE WATER ESC - ESCUTCHEON 2. ALL SANITARY SEWERS 2" AND SMALLER SHALL SLOPE 1/4" PER FOOT (MIN), ALL SANITARY ESH - EMERGENCY SHOWER NATURAL GAS — NG — NG — SEWERS 3" AND LARGER SHALL SLOPE 1/8" PER FOOT (MIN.) IN THE DIRECTION OF FLOW. ET - EXPANSION TANK **EWC - ELECTRIC WATER COOLER** --- NG ---- NG ---NATURAL GAS, BELOW GRADE RD - ROOF DRAIN 3. ALL HORIZONTALLY ROUTED WASTE VENTS SHALL BE INSTALLED WITH A SLOPE TO **EWC - ELECTRIC WATER COOLER** RDL - ROOF DRAIN LEADER FACILITATE GRAVITY DRAINAGE TO THE WASTE SYSTEM. **EWH - ELECTRIC WATER HEATER** LABORATORY WASTE RL - ROOF LEADER — LW — LW — EWS - EYE WASH STATION RO - REVERSE OSMOSIS WATER 4. ALL CLEANOUTS INSTALLED IN THE SEWER SYSTEM SHALL BE SIZED AS FOLLOWS: EX - EXISTING RWL - RAIN WATER LEADER — LW — — LW — LABORATORY WASTE BELOW GRADE SIZE OF CLEANOUT LABORATORY WASTE VENT ---LWV-----LWV---F - FAHRENHEIT 2 1/2" FCO - FLOOR CLEANOUT SAN - SANITARY SEWER SMACNA - SHEET METAL AND AIR CONDITIONING FCW - FILTERED COLD WATER CONTRACTORS NATIONAL ASSOCIATION FD - FLOOR DRAIN SCFM - STANDARD CUBIC FOOT/MINUTE FDC - FIRE DEPARTMENT (HOSE) CONNECTION 5. CLEANOUTS INSTALLED IN HORIZONTAL DRAINAGE PIPING SHALL BE SPACED AT INTERVALS SCW - SOFTENED COLD WATER FIN - FINISH NOT EXCEEDING 100'. SD - STORM DRAIN FL - FLOOR FM - FLOW METER SDMH - STORM DRAIN MANHOLE 6. THE MAXIMUM VERTICAL DISTANCE FROM THE FIXTURE OUTLET (LAVATORY, FLOOR DRAIN SP - SUMP PUMP FOP - FUEL OIL PUMP ETC.) TO THE TRAP WEIR SHALL BE 24". FOR - FUEL OIL RETURN **SPR - SPRINKLER LINE SQFT - SQUARE FEET** FOS - FUEL OIL SUPPLY SS - STAINLESS STEEL 7. SURFACES TO BE SOLDERED SHALL BE CLEANED BRIGHT. THE JOINTS SHALL BE PROPERLY FOV - FUEL OIL VENT DRAWING SYMBOLS PLUMBING VALVE SYMBOLS ST - STORAGE TANK FS - FLOOR SINK FLUXED AND MADE WITH APPROVED SOLDER. SOLDER JOINTS FOR POTABLE WATER SHALL SW - STORM WATER FS - FLOW SWITCH BE MADE WITH A SOLDER CONTAINING NOT MORE THAN 0.2 PERCENT LEAD. FU - FIXTURE UNITS 2 BALANCING VALVE **───────** KEY NOTE SYMBOL 8. UNIONS SHALL BE INSTALLED AT ALL EQUIPMENT. THE USE OF DIELECTRIC UNIONS AND FLANGES MUST BE INSTALLED IN AREAS WHERE JOINING OF DISSIMILAR METALS (ie CARBON TCV - TEMPERATURE CONTROL VALVE $\longrightarrow \bowtie$ GATE VALVE (ISOLATION VALVE) STEEL TO COPPER OR BRONZE, ETC.) THIS IS TO FACILITATE PIPING REMOVAL AND TD - TEMPERATURE DIFFERENCE 2 3 GAL - GALLON REASSEMBLY FOR FUTURE MAINTENANCE WORK AND/OR PREVENT GALVANIC CORROSION. MULTIPLE KEY NOTES APPLYING TO THE SAME ITEM TD - TRENCH DRAIN GCO - GRADE CLEANOUTS -ISOLATION VALVE WITH 3/4 " HOSE ADAPTER TDH - TOTAL DYNAMIC HEAD GPD - GALLONS PER DAY 9. CONTRACTOR SHALL PROPERLY BRACE, ANCHOR, AND SUPPORT ALL PIPING, VALVES ETC. IN TEMP - TEMPERATURE **GPH - GALLONS PER HOUR** ACCORDANCE WITH MSS SP-58. TMV - THERMOSTATIC MIXING VALVE -CHECK VALVE **GPM - GALLONS PER MINUTE** TP - TRAP PRIMER GPR - GAS PRESSURE REGULATOR **DETAIL NUMBER** TSTAT - THERMOSTAT 10. PIPE SUPPORT SPACING SHALL BE IN ACCORDANCE WITH MSS-58. GRS - GAS REGULATOR STATION ANGLE GLOBE VALVE TWR - TEMPERED WATER RETURN GT - GREASE TRAP XXX DRAWING NUMBER WHERE DRAWN GVTR - GAS VENT THROUGH ROOF TWS - TEMPERED WATER SUPPLY 11. ALL POTABLE WATER BRANCHES SHALL BE INSTALLED WITH ISOLATION VALVES CLOSE TO TYP - TYPICAL **GWH - GAS FIRED WATER HEATER BUTTERFLY VALVE** 12. ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH WATER ISOLATION VALVES. BALL VALVE SECTION LETTER UPC - UNIFORM PLUMBING CODE H&CW - HOT AND COLD WATER 13. CONTRACTOR SHALL PROVIDE WALL ACCESS COVERS TO ALL CLEANOUTS AND VALVES UR - URINAL HB - HOSE BIBB $\setminus XXX$ DRAWING NUMBER WHERE SHOWN MODULATING CONTROL VALVE LOCATED WITHIN WALLS. HD - HUB DRAIN HEX - HEAT EXCHANGER 14. ALL WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES SHALL BE PROTECTED IN HP - HORSEPOWER V - VENT TWO POSITION CONTROL VALVE VAC - VACUUM HS - HAND SINK ACCORDANCE WITH VETERAN'S AFFAIRS STANDARDS. BUILDING NO. WHERE EQUIPMENT IS LOCATED. HST - HOT WATER STORAGE TANK (DOMESTIC) VB - VACUUM BREAKER VCO - VACUUM CLEANER OUTLET HWB - HOT WATER BOILER THREE-WAY MODULATING CONTROL VALVE **EQUIPMENT ABBREVIATION (PUMP)** 15. ALL PIPES OR TUBING WHICH PASS THROUGH RATED AND NON-RATED WALLS, FLOORS AND HWCP - HOT WATER CIRCULATING PUMP VP - VACUUM PUMP FOUNDATION WALLS, SHALL PASS THROUGH A SCHEDULE 40 CARBON STEEL PIPE SLEEVE. PUMP NO. 3 IN BUILDING NO. 26 HWP - HOT WATER PUMP VS - VENT STACK 26-P 3 SLEEVES WHICH PASS THROUGH MASONRY SHALL BE GALVANIZED COATED. ALL SLEEVES HYD - HYDRANT VTR - VENT THROUGH ROOF SHALL BE INSTALLED FLUSH ON BOTH SIDES OF WALL PENETRATION. THREE-WAY TWO POSITION CONTROL VALVE TYPICAL UNIT NO. NON-RATED WALLS: THE SLEEVE SHALL BE SIZED TO ALLOW FREE PASSAGE OF INSULATED AND NON-INSULATED PIPES AND TUBING. W - WASTE RATED WALLS: PIPES WHICH PASS THROUGH FIRE-RATED WALLS & FLOOR SHALL USE ICW - INDUSTRIAL COLD WATER WC - WATER CLOSET PRESSURE REGULATING VALVE INV - INVERT THE APPROPRIATE CODE APPROVED, TESTED AND INSTALLATION METHOD OF SEALING PIPE SYSTEM WCO - WALL CLEANOUT IPC - INTERNATIONAL PLUMBING CODE WHILE MAINTAINING THE INTEGRITY OF THE WALL'S FIRE RATING(S). WG - WATER GAGE IRW - IRRIGATION WATER EXTENSION WALLS & FOUNDATION: PIPES WHICH PASS THROUGH EXTENSION WALLS OR RISER NUMBER WH - WALL HYDRANT AUTOMATIC FLOW CONTROL VALVE IW - INDIRECT WASTE FOUNDATION WALLS SHALL BE SEALED AND MADE WEATHER-TIGHT. WH - WATER HEATER IWH - INSTANTANEOUS WATER HEATER WHA - WATER HAMMER ARRESTER IWR - INDUSTRIAL WATER RETURN 16. INSULATE COLD AND HOT WATER PIPING PER THE PROJECT DOCUMENTS WITH FIRE WL - WATER LINE PRESSURE RELIEF VALVE IWS - INDUSTRIAL WATER SUPPLY RETARDANT VAPOR BARRIER JACKET. PIPE INSULATION SHALL BE SEALED WITH A FIRE WM - WATER METER RESISTIVE ADHESIVE. WPD - WATER PRESSURE DROP WS - WASTE STACK KW - KILOWATT MANUAL AIR VENT 17. CONTRACTOR IS RESPONSIBLE FOR ALL TESTING AND COORDINATION OF INSPECTIONS OF KWHR - KILOWATT-HOUR THE ENTIRE POTABLE WATER, SANITARY SEWER AND VENT SYSTEMS. TESTING SHALL BE IN ACCORDANCE WITH THE VETERAN'S AFFAIRS STANDARDS AND THE INTERNATIONAL YCO - YARD CLEANOUT PLUMBING CODE. TEST PLUG (PRESSURE/TEMPERATURE) YH - YARD HYDRANT 18. ALL PIPING AND VALVES SHALL BE PROPERLY IDENTIFIED, LABELED AND TAGGED. **AUTOMATIC AIR VENT** 19. CONTRACTOR SHALL FLUSH AND DISINFECT THE ENTIRE POTABLE WATER SYSTEM. FLUSHING AND DISINFECTION OF THE POTABLE WATER SYSTEM SHALL BE IN ACCORDANCE WITH THE VETERAN'S AFFAIRS STANDARDS AND THE INTERNATIONAL PLUMBING CODE. **BACKFLOW PREVENTER** ALL SYMBOLS AND ABBREVIATIONS MAY 20. PROVIDE THREE (3) ELBOW SWING JOINTS FOR ALL DOMESTIC HOT WATER CONNECTIONS TO NOT BE INDICATED ON THE DRAWINGS. THE MAIN. 21. CONTRACTOR SHALL PROVIDE AND INSTALL THERMAL EXPANSION/CONTRACTION COMPENSATION IN THE DOMESTIC HOT WATER AND RECIRCULATION SYSTEMS, LIMITING THE MAXIMUM MOVEMENT TO 1 1/2" OR LESS. ANCHORS & RESTRAINTS SHALL BE INSTALLED WHERE NECESSARY AND ADJACENT FIRE RATED WALLS AND FLOORS. ALL PIPES SHALL BE PROPERLY GUIDED INTO THE THERMAL EXPANSION LOOPS OR COMPENSATORS. Project Title Drawing Title CONSULTANTS: MILLER-REMICK CORPORA ARCHITECT / ENGINEERS: **PLUMBING GENERAL NOTES, SYMBOLS AND**

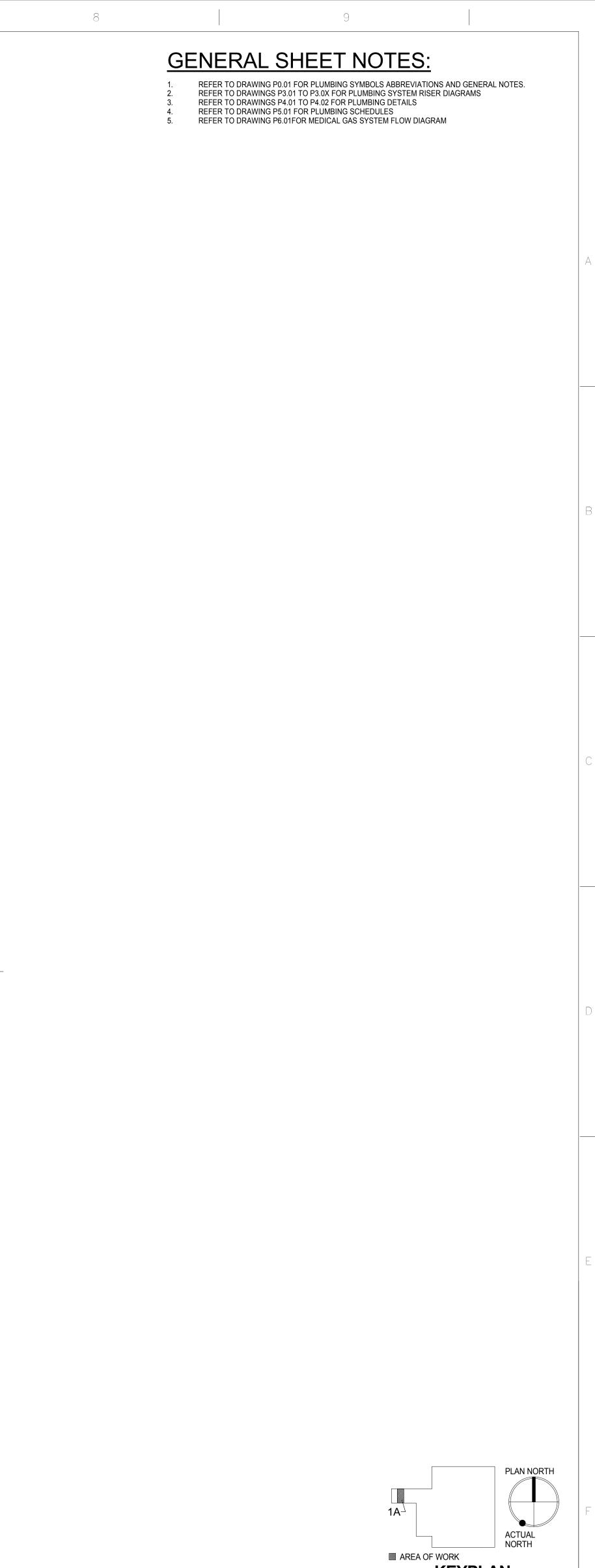
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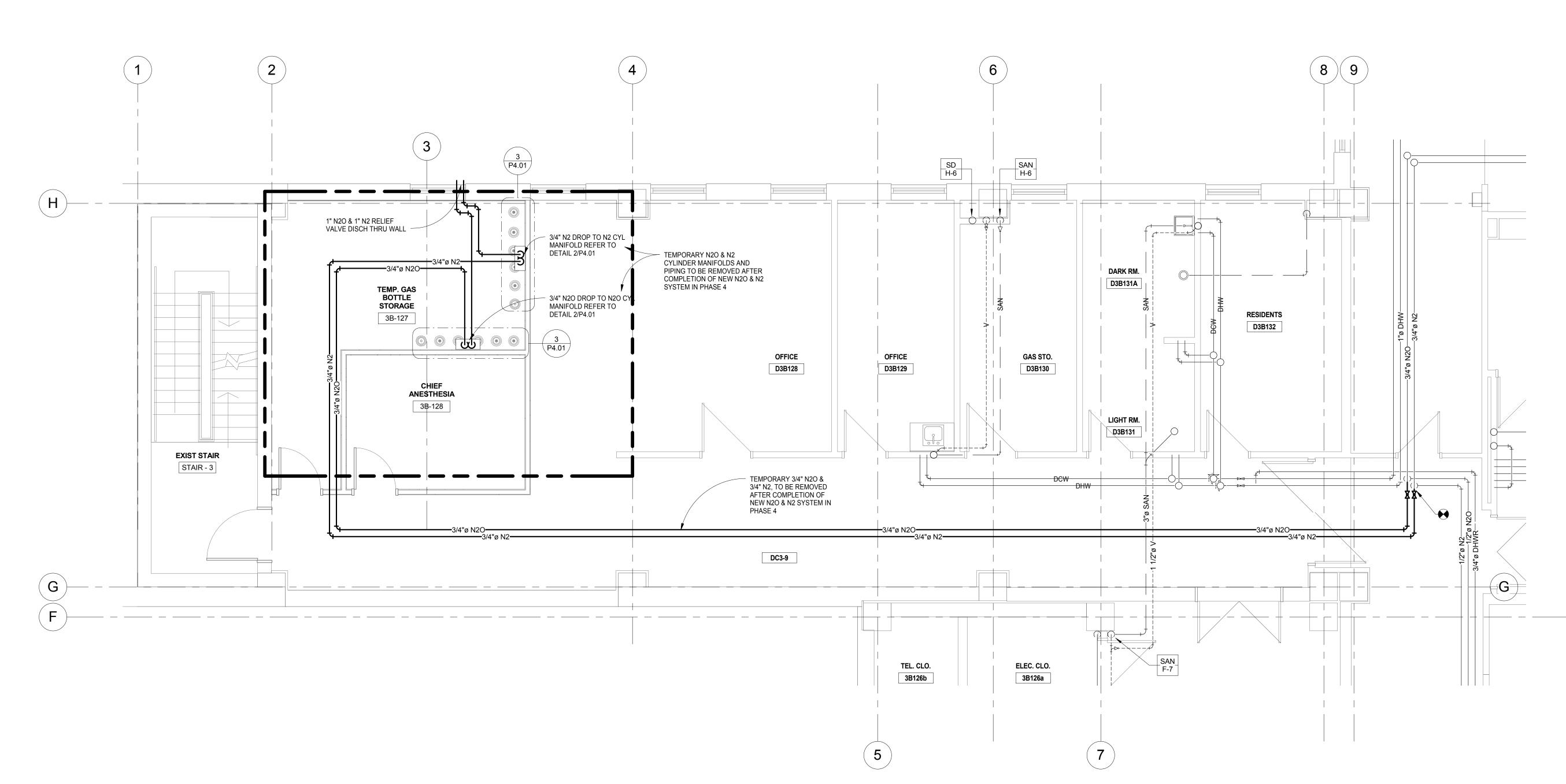
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Project Number **RENOVATE SURGICAL** Office of 581-13-101 **SERVICE & UPGRADE** Construction **Building Number ABBRVIATIONS OPERATING ROOMS** ARCHITECTURE, PLANNING, INTERIORS and Facilities Miller-Remick LLC World Trade Center M.E.P. & Structural Engineering 101 West Main Street, Suite 7000 A Service Disabled Veteran Owned Approved: Medical Center Director Drawing Number Management Location HUNTINGTON, WV SDVOSB Norfolk, VA 23510 Phone: 757-471-0537 1010 KINGS HIGHWAY SOUTH P0.01 CHERRY HILL, NEW JERSEY 08034 Fax: 757-471-4205 Checked www.pfa-architect.com Department of Veterans Affairs FAX: (856)429-5002 MP PD Dwg. 153 of 178 DATE **DESCRIPTION**







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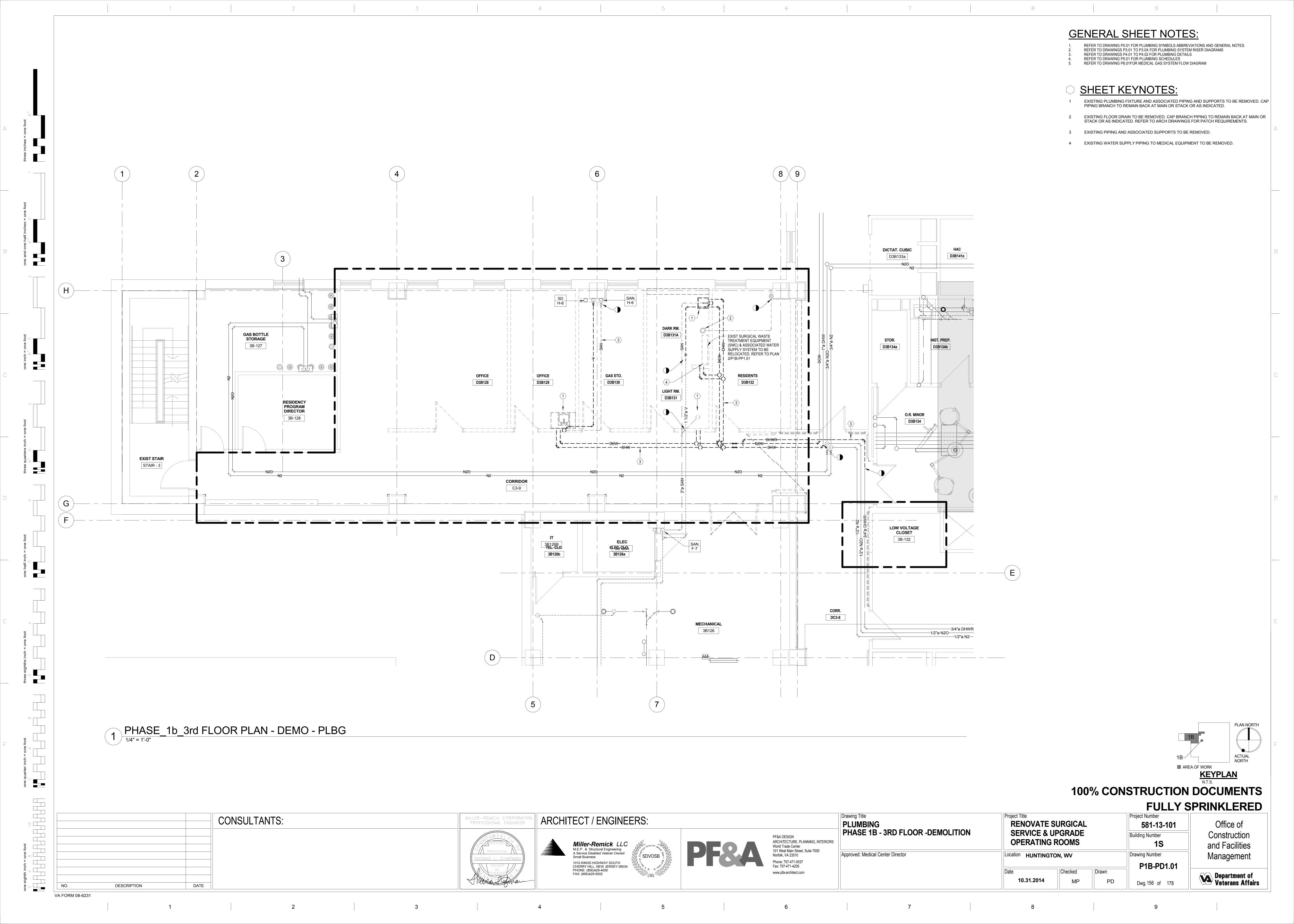
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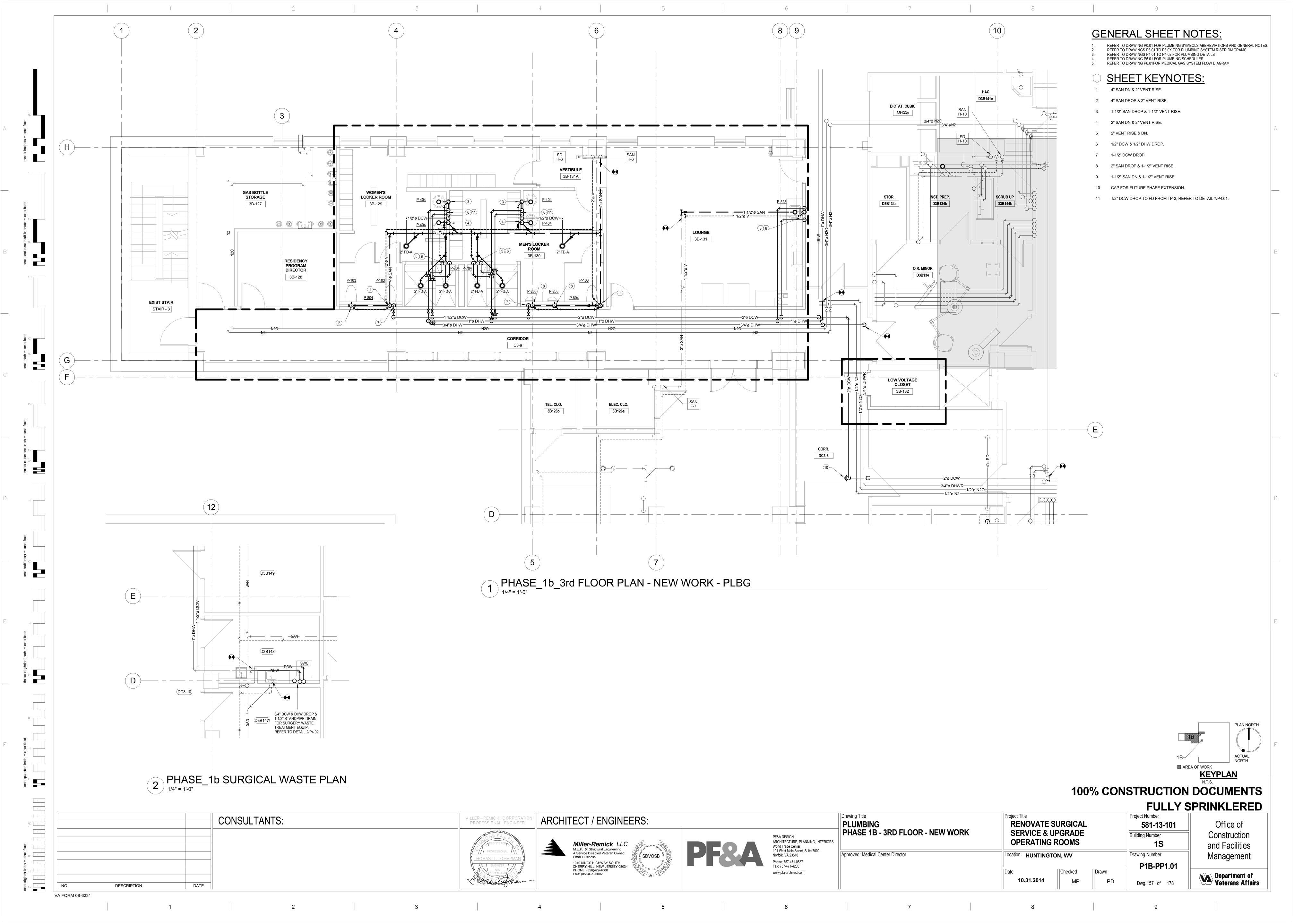
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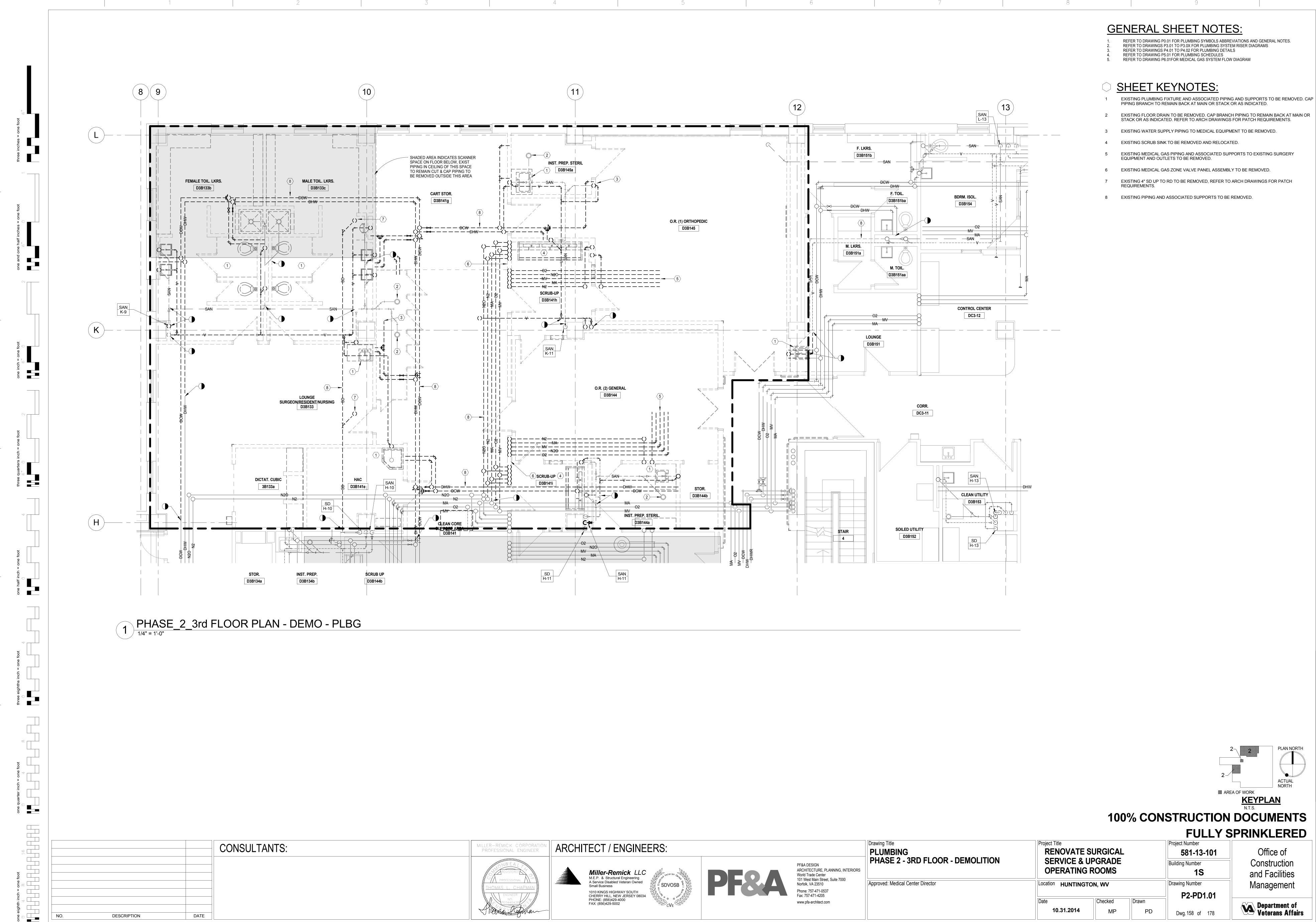
CONSULTANTS:	MILLER-REMICK CORPORATION PROFESSIONAL ENGINEER	ARCHITECT / ENGINEERS:	Drawing Title PLUMBING	Project Title RENOVATE SURGICAL	FULLY Project Number 581-13-101	SPRINKLERED Office of	
	THOMAS L. CHAPMAN ENGINEER	Miller-Remick LLC M.E.P. & Structural Engineering MEP. & Structural Engineering M.E.P. & Structural Engineering	G, INTERIORS PHASE 1A - 3RD FLOOR - NEW WORK	SERVICE & UPGRADE OPERATING ROOMS	Building Number 1S	Construction and Facilities	
		A Service Disabled Veteran Owned Small Business 1010 KINGS HIGHWAY SOUTH CHERRY HILL, NEW JERSEY 08034	Approved: Medical Center Director	Location HUNTINGTON, WV	Drawing Number P1A-PP1.01	Management	
NO. DESCRIPTION DATE	PEO44043R	PHONE: (856)429-4000 FAX: (856)429-5002 www.pfa-architect.com		Date Checked Drawn MP I	PD Dwg.155 of 178	Department of Veterans Affairs	
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FAX: (856)429-5002

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ARCHITECTURE, PLANNING, INTERIORS

Approved: Medical Center Director

World Trade Center 101 West Main Street, Suite 7000

Construction

and Facilities

Management

Department of Veterans Affairs

Building Number

Drawing Number

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P2-PD1.01

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OPERATING ROOMS

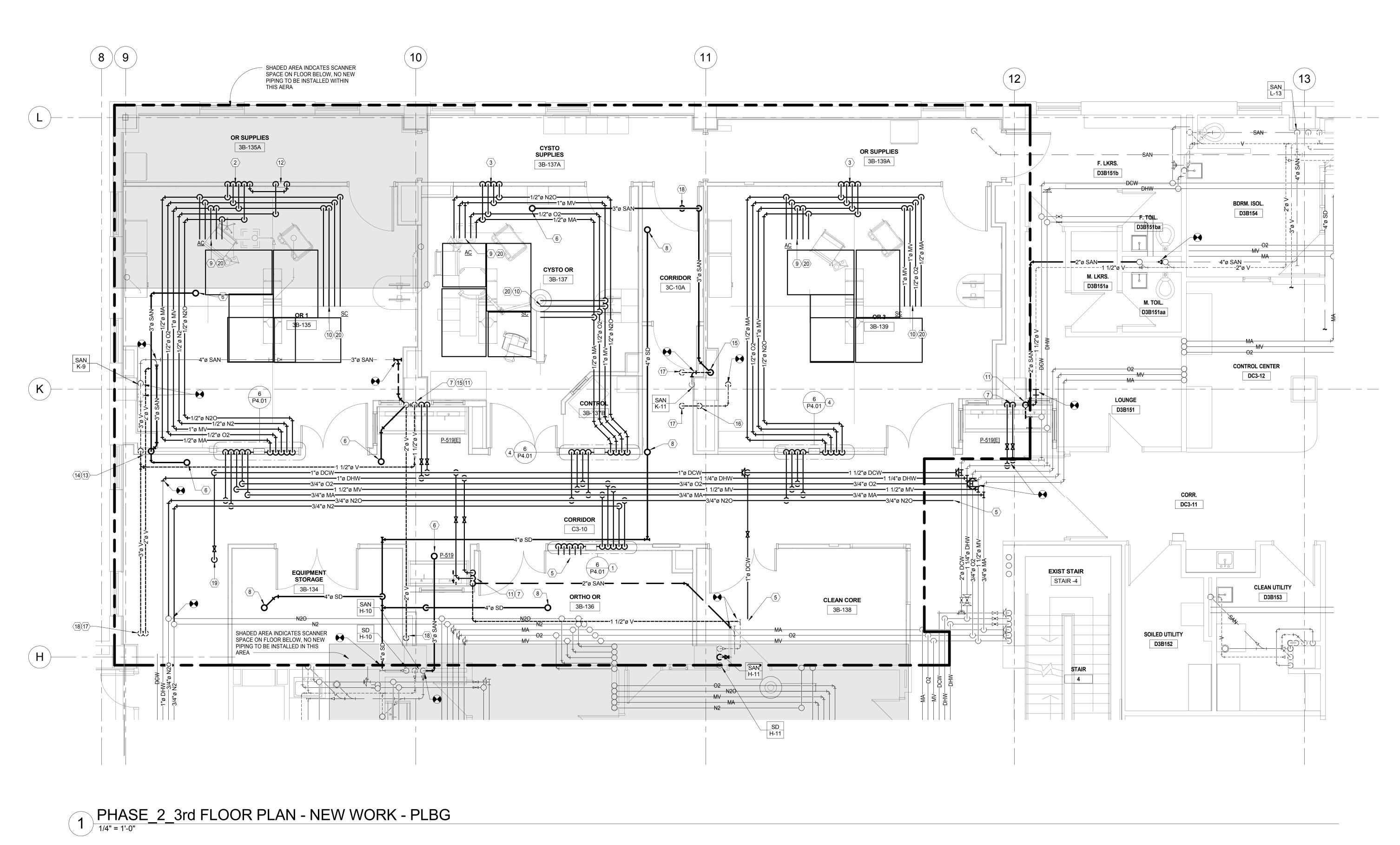
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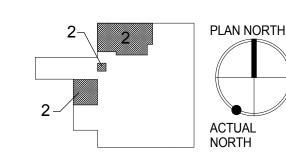
DESCRIPTION

GENERAL SHEET NOTES:

- REFER TO DRAWING P0.01 FOR PLUMBING SYMBOLS ABBREVIATIONS AND GENERAL NOTES. REFER TO DRAWINGS P3.01 TO P3.0X FOR PLUMBING SYSTEM RISER DIAGRAMS
- REFER TO DRAWINGS P4.01 TO P4.02 FOR PLUMBING DETAILS REFER TO DRAWING P5.01 FOR PLUMBING SCHEDULES
- REFER TO DRAWING P6.01FOR MEDICAL GAS SYSTEM FLOW DIAGRAM

SHEET KEYNOTES:

- 1 1/2" N2, 1/2" N2O, 1" MV, 1/2" O2, & 1/2" MA DROP TO ZONE VALVE BOX, REFER TO DETAIL 4/P4.01.
- 1/2" N2, 1/2" N2O, 3/4" MV, 1/2" O2, & 1/2" MA DROP TO WALL OUTLETS, REFER TO ARCH DWGS FOR QUANITY AND ARRANGEMENT.
- 1/2" N2O, 3/4" MV, 1/2" O2, & 1/2" MA DROP TO WALL OUTLETS, REFER TO ARCH DWGS FOR QUANITY AND ARRANGEMENT.
- 1/2" N2O, 1" MV, 1/2" O2, & 1/2" MA DROP TO ZONE VALVE BOX, REFER TO DETAIL 4/P4.01.
- CAP FOR FUTURE PHASE EXTENSION.
- 6 3" SAN UP TO FD INSTALLED IN PEM BY MANUFACTURER.
- 3/4" DCW & 3/4" DHW DROP.
- 4" SD UP TO RD.
- 1/2" N2O, (2)3/4" MV, 1/2" O2, & 1/2" MA DROP TO ANESTHESIA COLUMN/BOOM.
- (2)3/4" MV, 1/2" O2, & 1/2" MA DROP TO SURGICAL COLUMN/EQUIPMENT BOOM.
- 11 2" SAN DROP & 1-1/2" VENT RISE.
- 1/2" N2 DROP TO PRESSURE CONTROL PANEL.
- 13 3" OFFSET VENT STACK RISE & DN.
- 14 3" SAN RISE & DN.
- 15 3" SAN DN & 2" VENT RISE.
- 16 2" VENT RISE & DN.
- 17 3" VENT THRU ROOF.
- 18 2" VENT THRU ROOF.
- 19 1" DCW UP TO PEM MAKE UP WATER CONNECTION, SHUT-OFF VALVES AND BFP ASSEMBLY PROVIDED BY PEM MANUFACTURER.
- ALL LABOR AND MATERIAL TO SUPPORT NEW AND RELOCATED SURGICAL EQUIPMENT BOOMS, LIGHT BOOMS, AND GAS COLUMNS, INCLUDING, BUT NOT LIMITED TO, ALL NECESSARY SUPPLEMENTAL STRUCTURAL STEEL FRAMING AND SUPPORTS TO BE PROVIDED AND INSTALLED BY BOOM/COLUMN MANUFACTURER. TYPICAL FOR ROOMS 3B-135, 3B-136, 3B-137, 3B-139, 3B-141, 3B-143 (OR'S 1-6). REFER TO MANUFACTURER SUBMITTED DETAILS AND DRAWINGS. MANUFACTURER TO SUBMIT FRAMING PLANS AND CALCULATIONS, STAMPED BY A
 - PROFESSIONAL ENGINEER, OF NEW AND RELOCATED EQUIPMENT SUPPORTS ATTACHED TO EXISTING OR NEW STRUCTURES, TO THE ENGINEER FOR REVIEW PRIOR TO STARTING THE WORK. CONTRACTOR TO COORDINATE WORK WITH ALL TRADES PRIOR TO STARTING THE



AREA OF WORK KEYPLAN N.T.S.

Office of

Construction

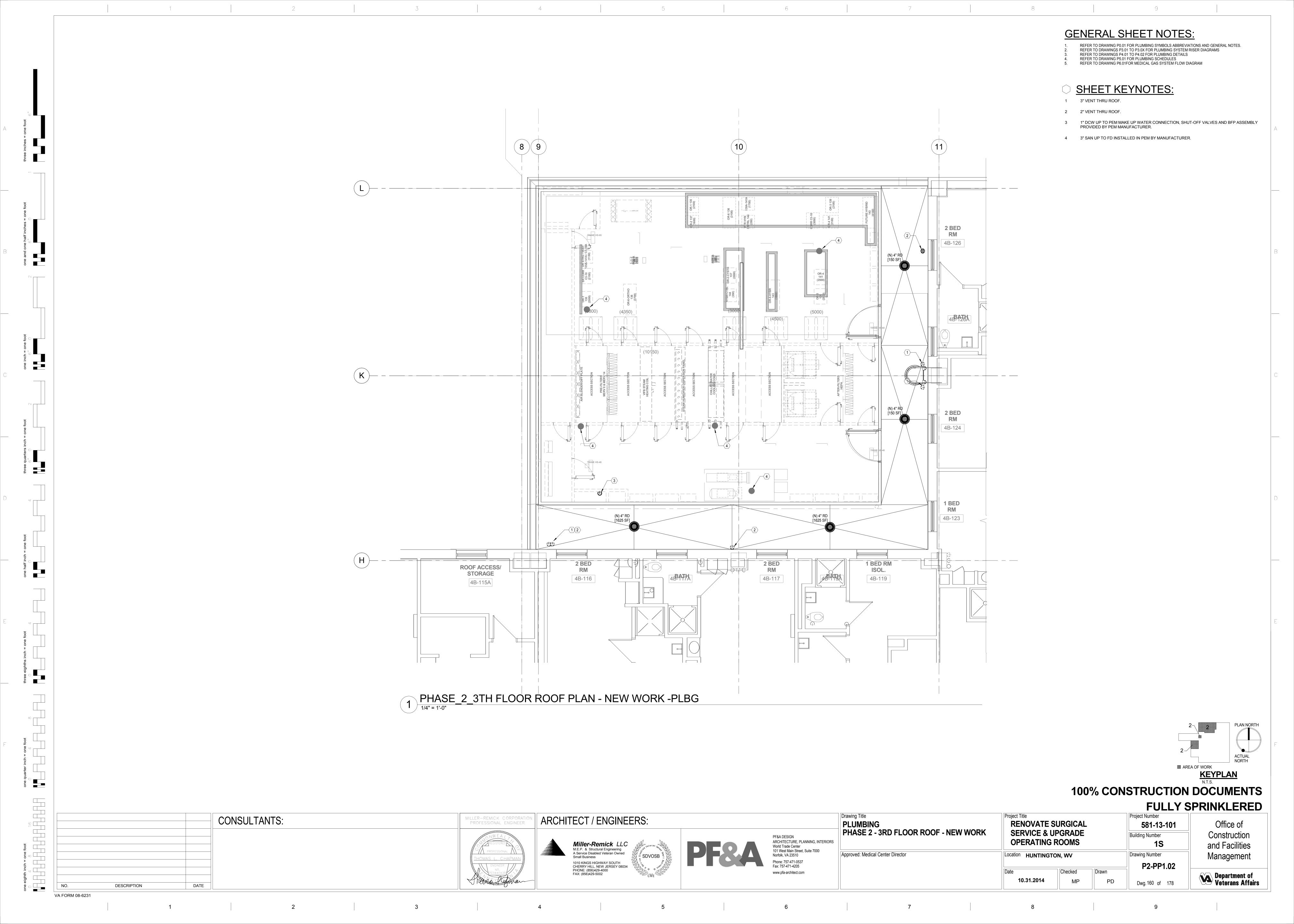
and Facilities

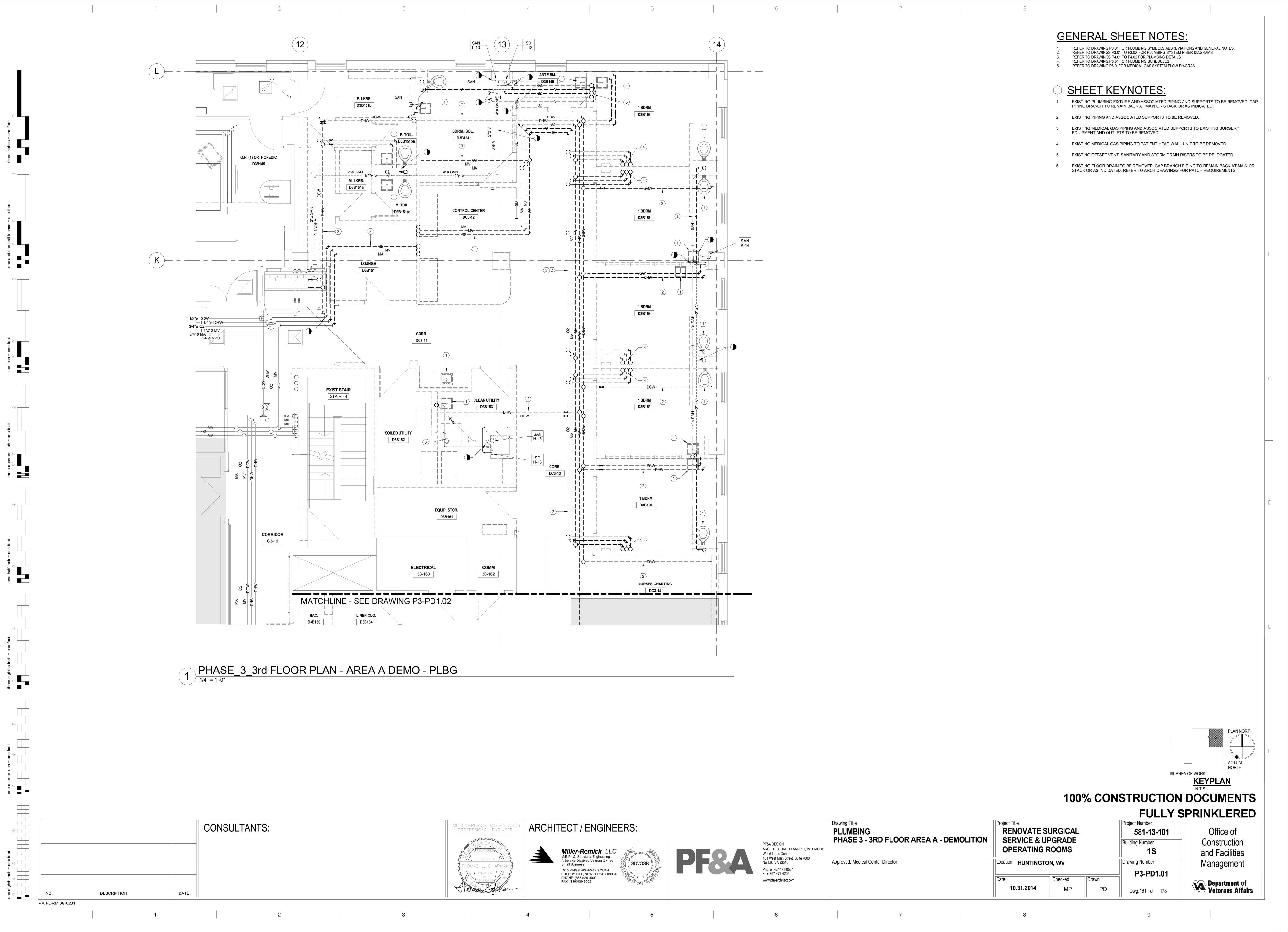
Management

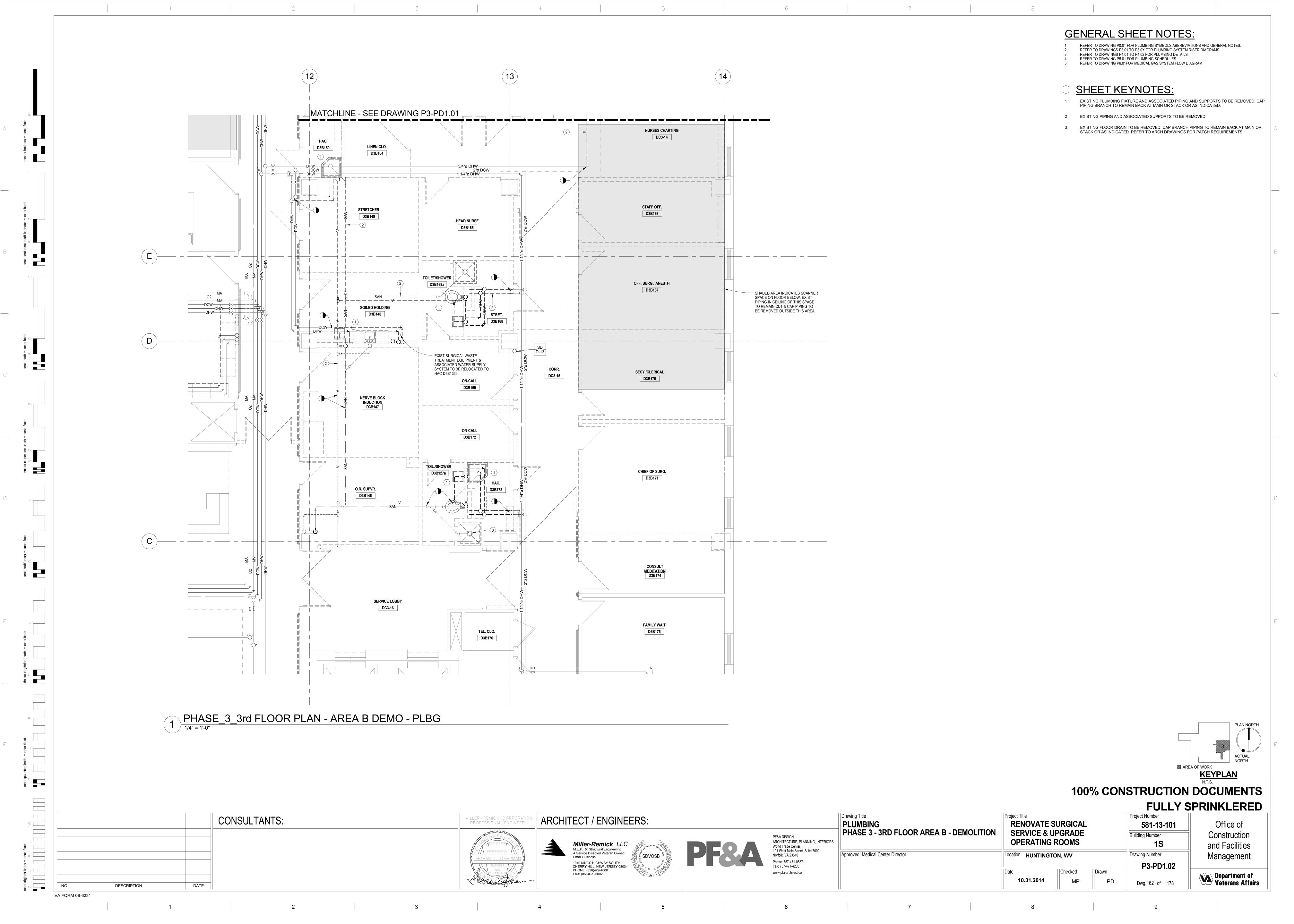
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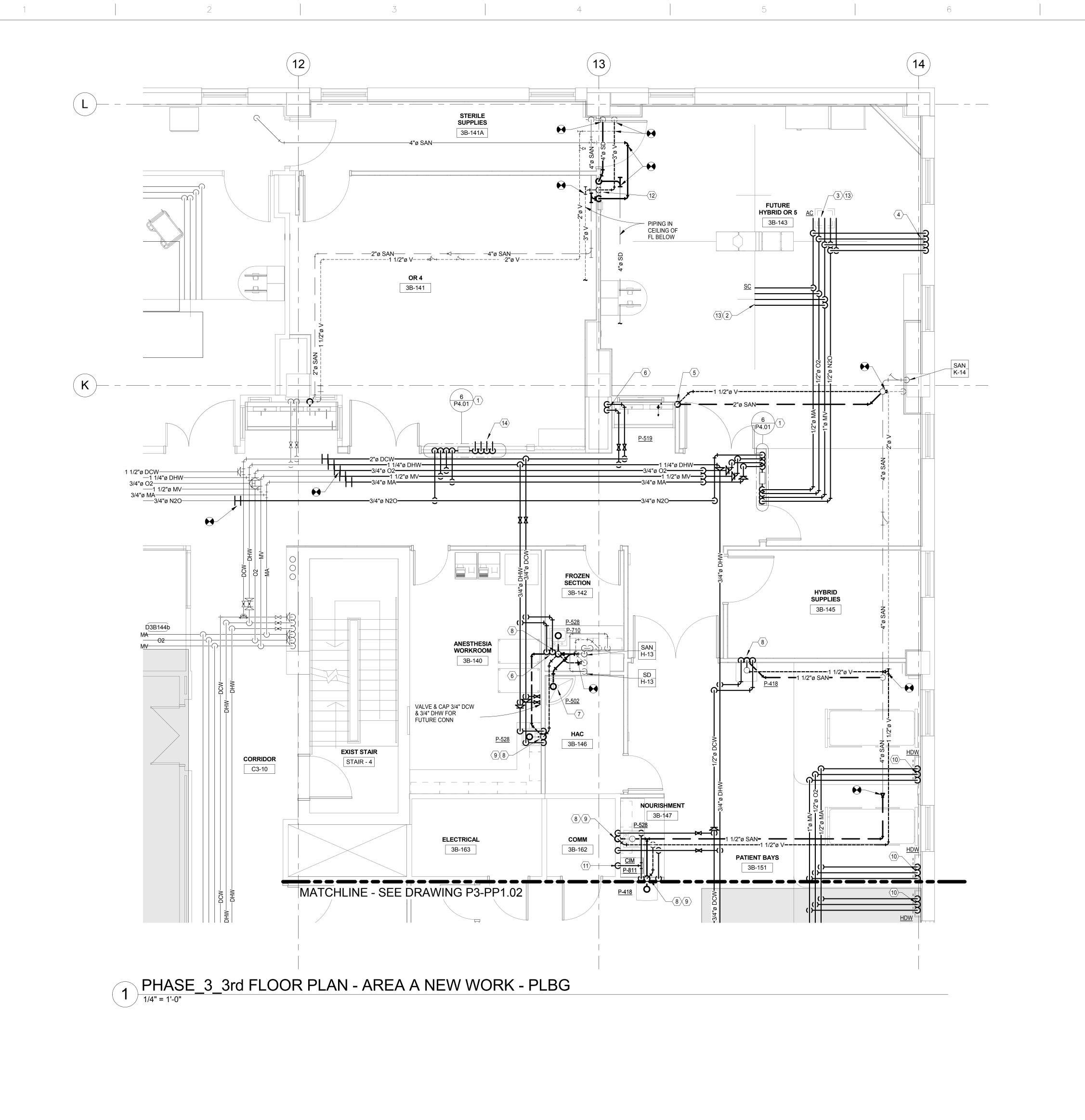
Drawing Title Project Title Project Number CONSULTANTS: ARCHITECT / ENGINEERS: MILLER-REMICK CORPORATION RENOVATE SURGICAL PLUMBING 581-13-101 PHASE 2 - 3RD FLOOR - NEW WORK **SERVICE & UPGRADE Building Number** PF&A DESIGN **OPERATING ROOMS** ARCHITECTURE, PLANNING, INTERIORS Miller-Remick LLC
M.E.P. & Structural Engineering
A Service Disabled Veteran Owned **1S** World Trade Center 101 West Main Street, Suite 7000 Approved: Medical Center Director Location HUNTINGTON, WV Drawing Number ្តី SDVOSB ថ្មី Norfolk, VA 23510 Phone: 757-471-0537 Fax: 757-471-4205 1010 KINGS HIGHWAY SOUTH CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 P2-PP1.01 Checked www.pfa-architect.com Department of Veterans Affairs FAX: (856)429-5002 10.31.2014 MP PD Dwg.159 of 178 DATE

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VA FORM 08-6231

DESCRIPTION

GENERAL SHEET NOTES:

REFER TO DRAWING P0.01 FOR PLUMBING SYMBOLS ABBREVIATIONS AND GENERAL NOTES. REFER TO DRAWINGS P3.01 TO P3.0X FOR PLUMBING SYSTEM RISER DIAGRAMS REFER TO DRAWINGS P4.01 TO P4.02 FOR PLUMBING DETAILS REFER TO DRAWING P5.01 FOR PLUMBING SCHEDULES REFER TO DRAWING P6.01FOR MEDICAL GAS SYSTEM FLOW DIAGRAM

SHEET KEYNOTES:

1 1/2" N2O, 1" MV, 1/2" O2, & 1/2" MA DROP TO ZONE VALVE BOX, REFER TO DETAIL 4/P4.01.

(2)3/4" MV, 1/2" O2, & 1/2" MA DROP TO SURGICAL COLUMN/EQUIPMENT BOOM.

1/2" N2O, (2)3/4" MV, 1/2" O2, & 1/2" MA DROP TO ANESTHESIA COLUMN/BOOM.

1/2" N2O, 3/4" MV, 1/2" O2, & 1/2" MA DROP TO WALL OUTLETS, REFER TO ARCH DWGS FOR QUANITY AND ARRANGEMENT.

5 2" SAN DROP & 1-1/2" VENT RISE.

3/4" DCW & 3/4" DHW DROP.

7 3" SAN UP TO MSB.

8 1-1/2" SAN DN & 1-1/2" VENT RISE.

9 1/2" DCW & 1/2" DHW DROP.

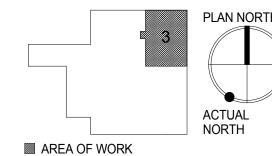
10 3/4" MV, 1/2" O2 & 1/2" MA DROP TO HEAD WALL.

11 1-1/2" DCW DROP.

4" SD, 3" VENT & 4" SAN RISE & DN (EXIST RISERS TO BE RELOCATED)

ALL LABOR AND MATERIAL TO SUPPORT NEW AND RELOCATED SURGICAL EQUIPMENT BOOMS, LIGHT BOOMS, AND GAS COLUMNS, INCLUDING, BUT NOT LIMITED TO, ALL NECESSARY SUPPLEMENTAL STRUCTURAL STEEL FRAMING AND SUPPORTS TO BE PROVIDED AND INSTALLED BY BOOM/COLUMN MANUFACTURER. TYPICAL FOR ROOMS 3B-135, 3B-136, 3B-137, 3B-139, 3B-141, 3B-143 (OR'S 1-6). REFER TO MANUFACTURER SUBMITTED DETAILS AND DRAWINGS. MANUFACTURER TO SUBMIT FRAMING PLANS AND CALCULATIONS, STAMPED BY A PROFESSIONAL ENGINEER, OF NEW AND RELOCATED EQUIPMENT SUPPORTS ATTACHED TO EXISTING OR NEW STRUCTURES, TO THE ENGINEER FOR REVIEW PRIOR TO STARTING THE WORK. CONTRACTOR TO COORDINATE WORK WITH ALL TRADES PRIOR TO STARTING THE

14 CAP FOR FUTURE PHASE EXTENSION.



KEYPLAN N.T.S.

Office of

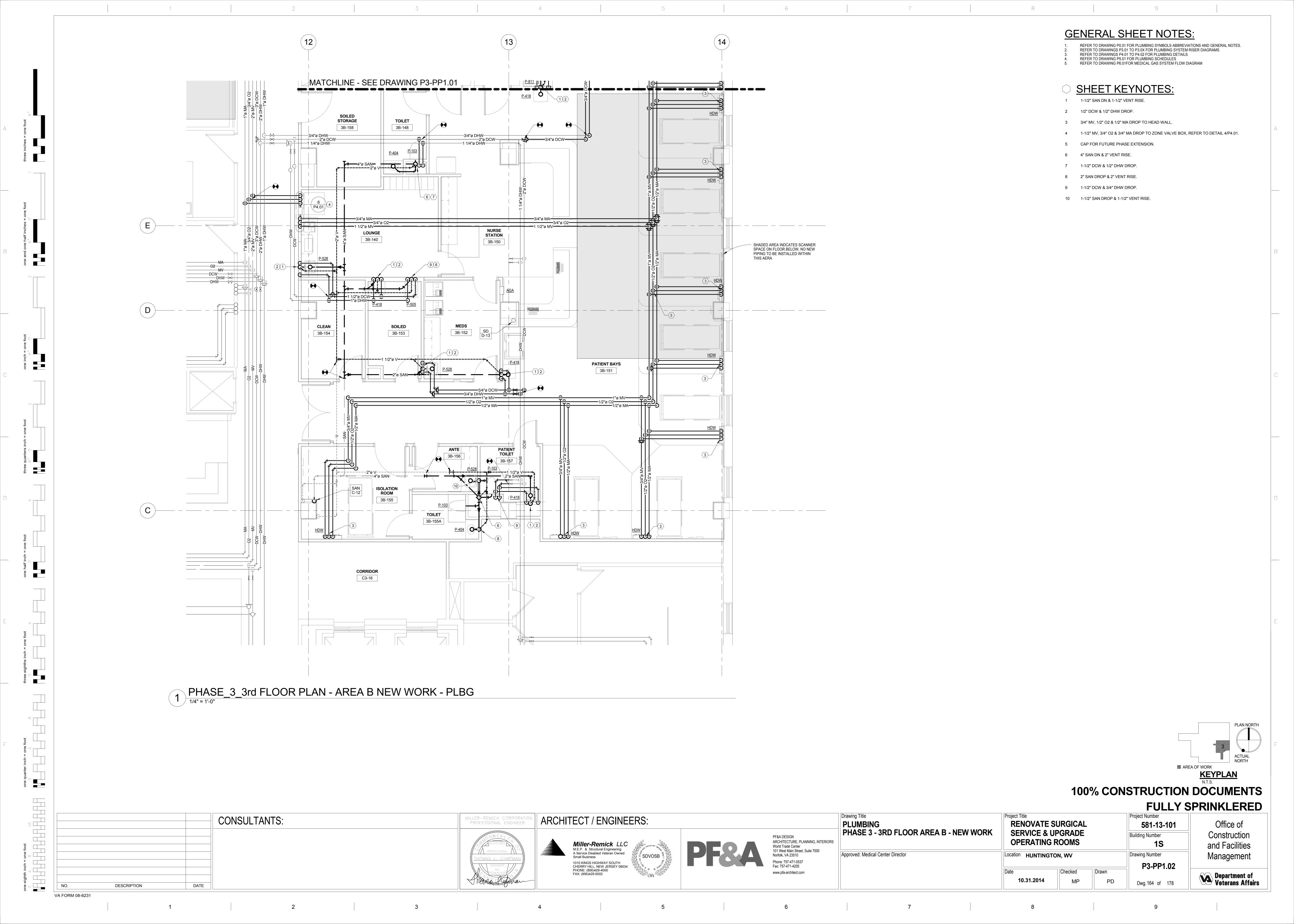
Construction

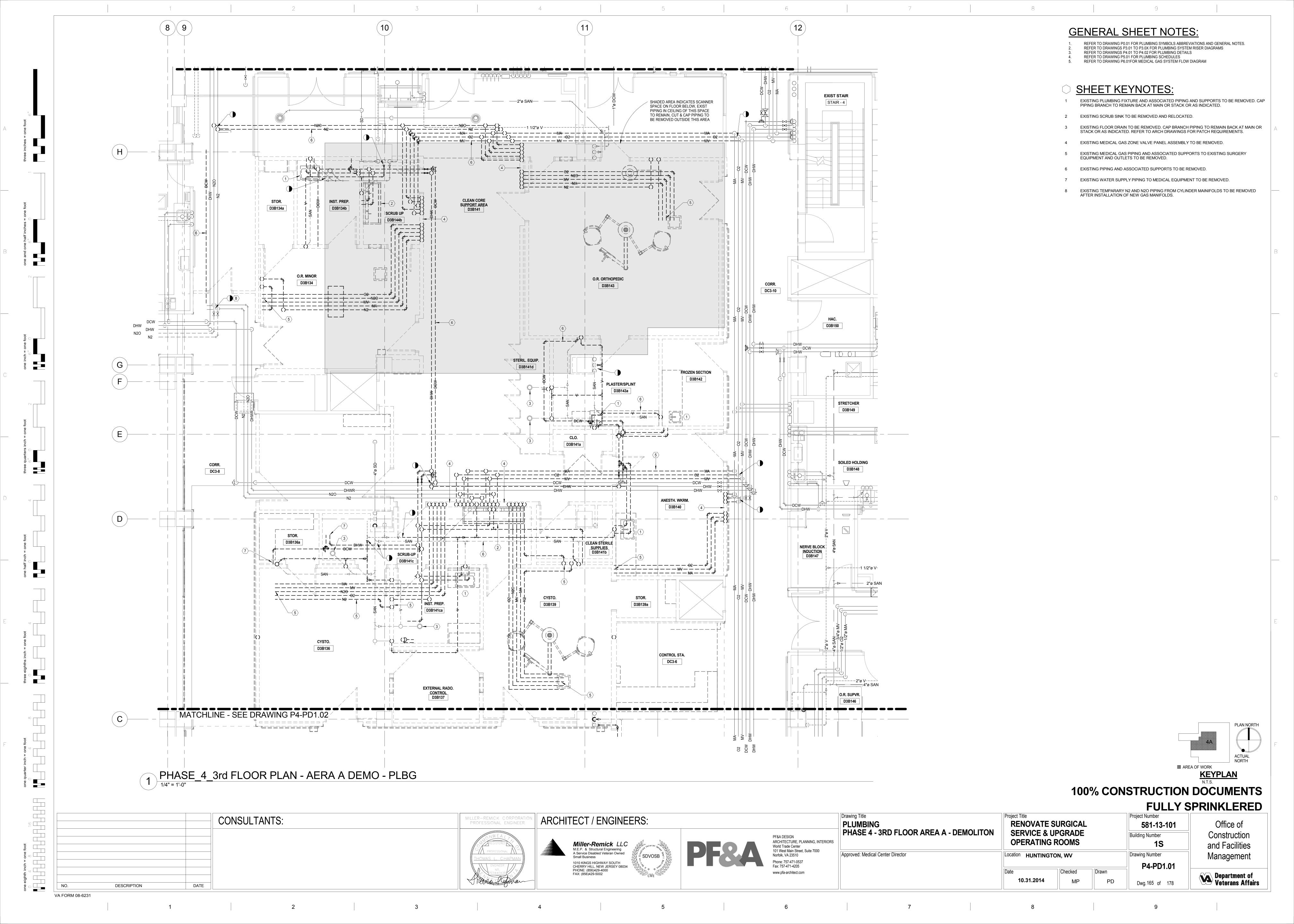
and Facilities

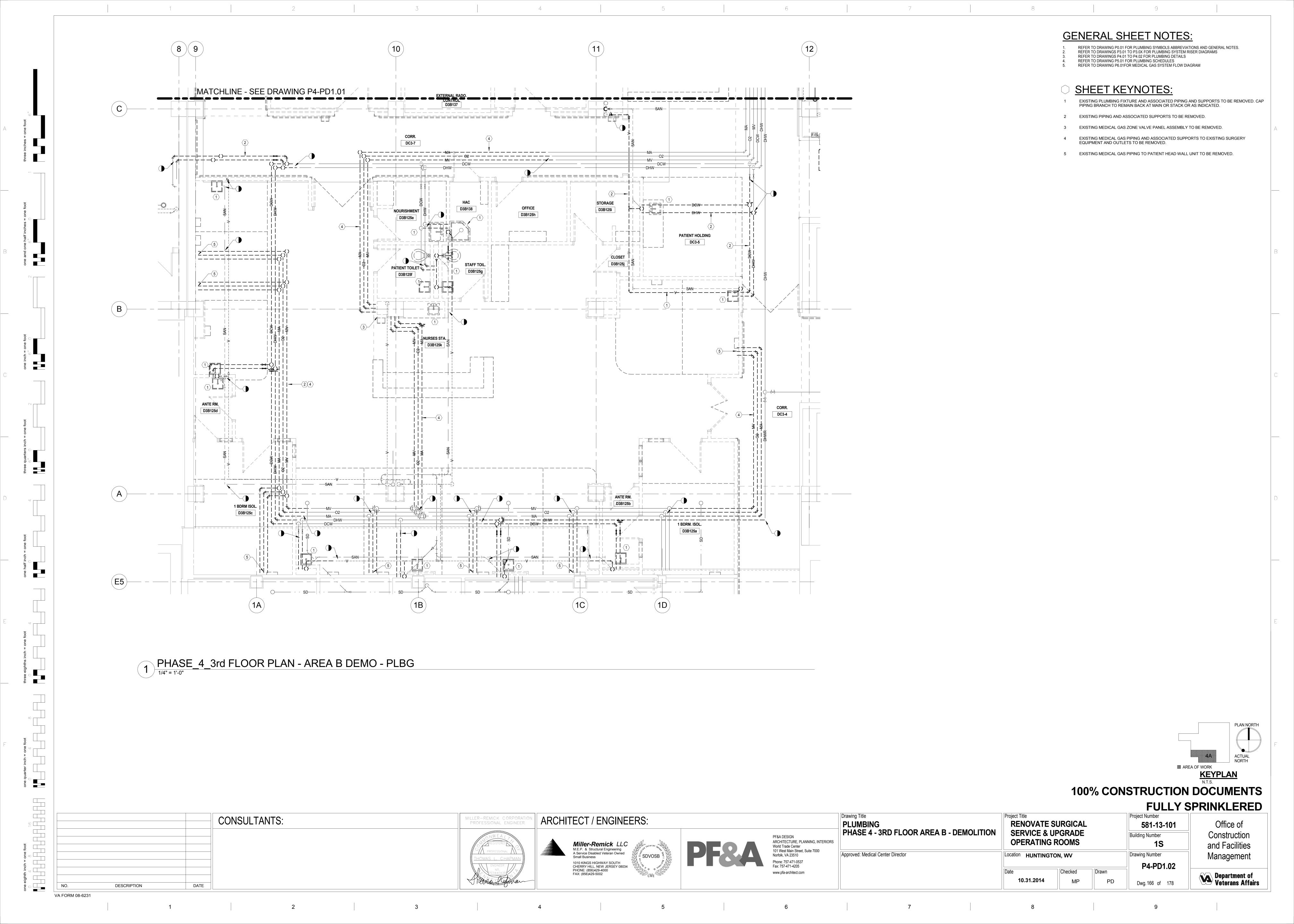
Management

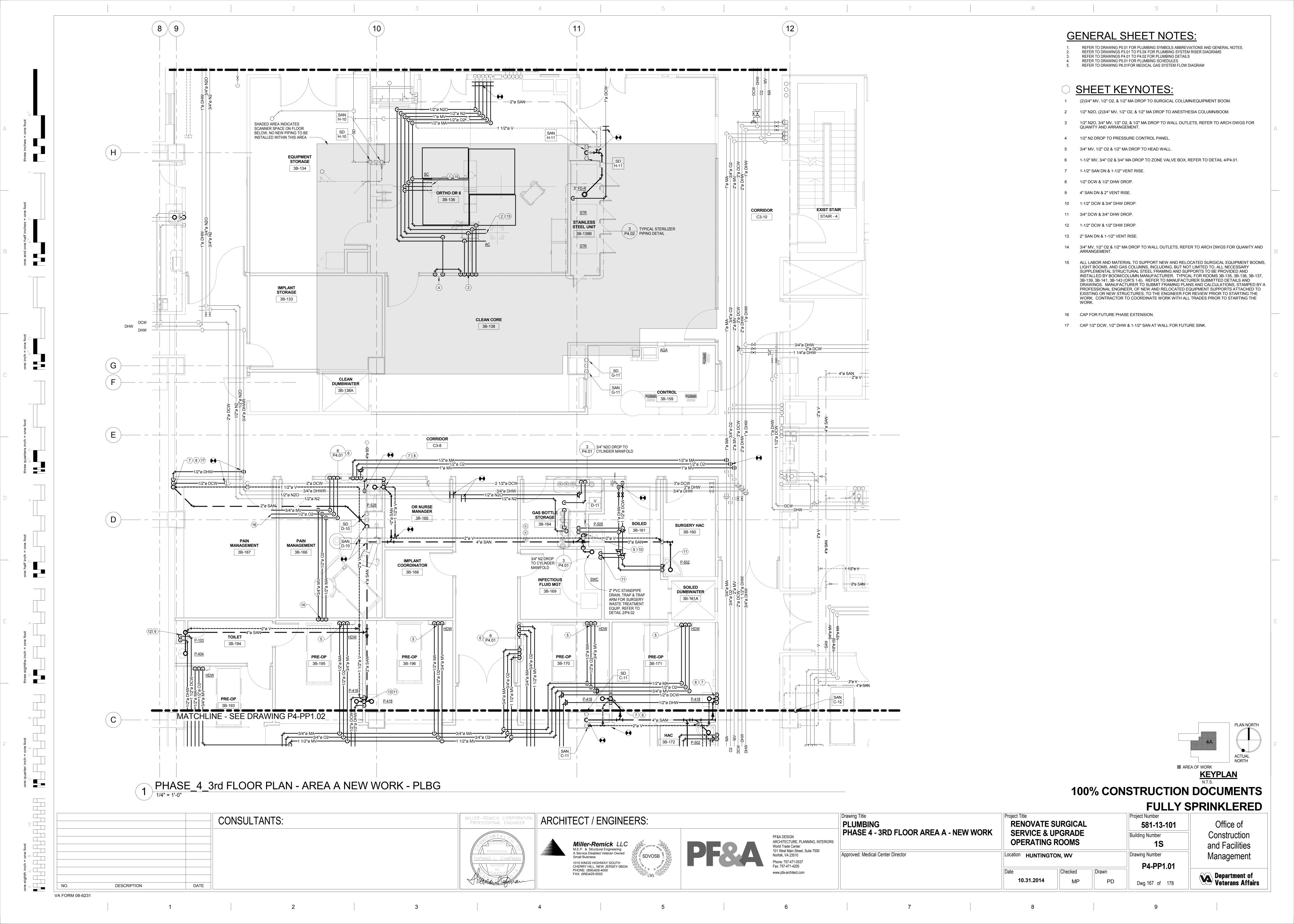
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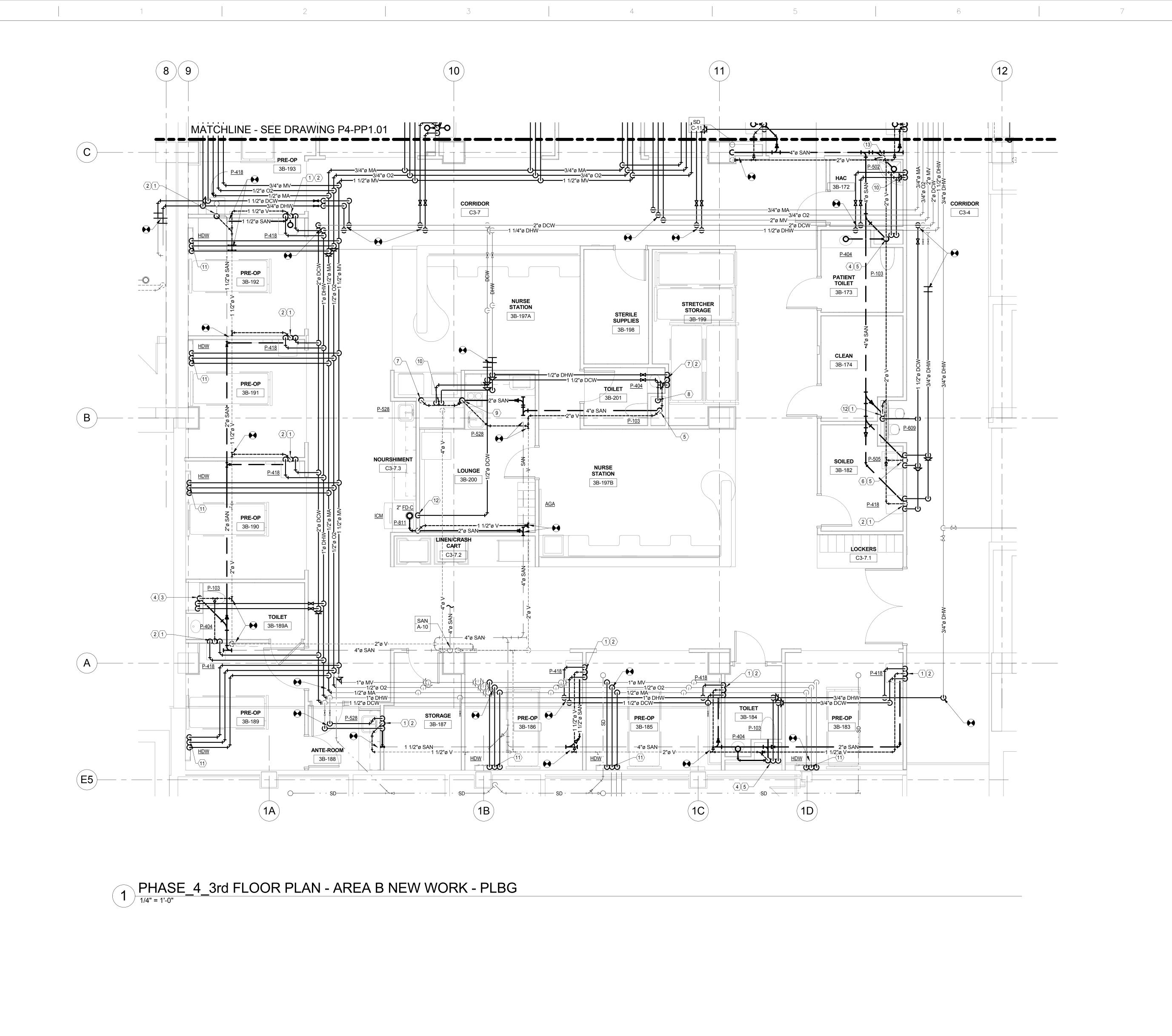
Drawing Title Project Title Project Number MILLER-REMICK CORPORAT PROFESSIONAL ENGINEER CONSULTANTS: ARCHITECT / ENGINEERS: **RENOVATE SURGICAL** PLUMBING 581-13-101 PHASE 3 - 3RD FLOOR AREA A - NEW WORK **SERVICE & UPGRADE Building Number** PF&A DESIGN ARCHITECTURE, PLANNING, INTERIORS
World Trade Center
101 West Main Street, Suite 7000 **OPERATING ROOMS** Miller-Remick LLC
M.E.P. & Structural Engineering
A Service Disabled Veteran Owned 18 Approved: Medical Center Director Location HUNTINGTON, WV Drawing Number ្តី SDVOSB ថ្មី Norfolk, VA 23510 Phone: 757-471-0537 Fax: 757-471-4205 1010 KINGS HIGHWAY SOUTH CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 P3-PP1.01 Checked www.pfa-architect.com Department of Veterans Affairs FAX: (856)429-5002 10.31.2014 MP PD Dwg. 163 of 178 DATE











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VA FORM 08-6231

GENERAL SHEET NOTES:

REFER TO DRAWING P0.01 FOR PLUMBING SYMBOLS ABBREVIATIONS AND GENERAL NOTES.
 REFER TO DRAWINGS P3.01 TO P3.0X FOR PLUMBING SYSTEM RISER DIAGRAMS
 REFER TO DRAWINGS P4.01 TO P4.02 FOR PLUMBING DETAILS

4. REFER TO DRAWINGS P4.01 TO P4.02 FOR PLUMBING DETAILS
4. REFER TO DRAWING P5.01 FOR PLUMBING SCHEDULES
5. REFER TO DRAWING P6.01FOR MEDICAL GAS SYSTEM FLOW DIAGRAM

SHEET KEYNOTES:

1 1-1/2" SAN DN & 1-1/2" VENT RISE.

2 4/2" DOM 9 4/2" DUM DDOD

2 1/2" DCW & 1/2" DHW DROP.

4 1-1/2" DCW & 1/2" DHW DROP.

3 4" SAN DROP & 2" VENT RISE.

5 4" SAN DN & 2" VENT RISE.

1-1/2" DCW & 3/4" DHW DROP.

7 1-1/2" SAN DROP & 1-1/2" VENT RISE.

8 1-1/2" DCW DROP.

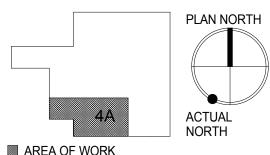
9 2" SAN DN & 2" VENT RISE.

10 3/4" DCW & 3/4" DHW DROP.

11 3/4" MV, 1/2" O2 & 1/2" MA DROP TO HEAD WALL.

12 1/2" DCW DROP.

13 1-1/2" VENT RISE & DN.

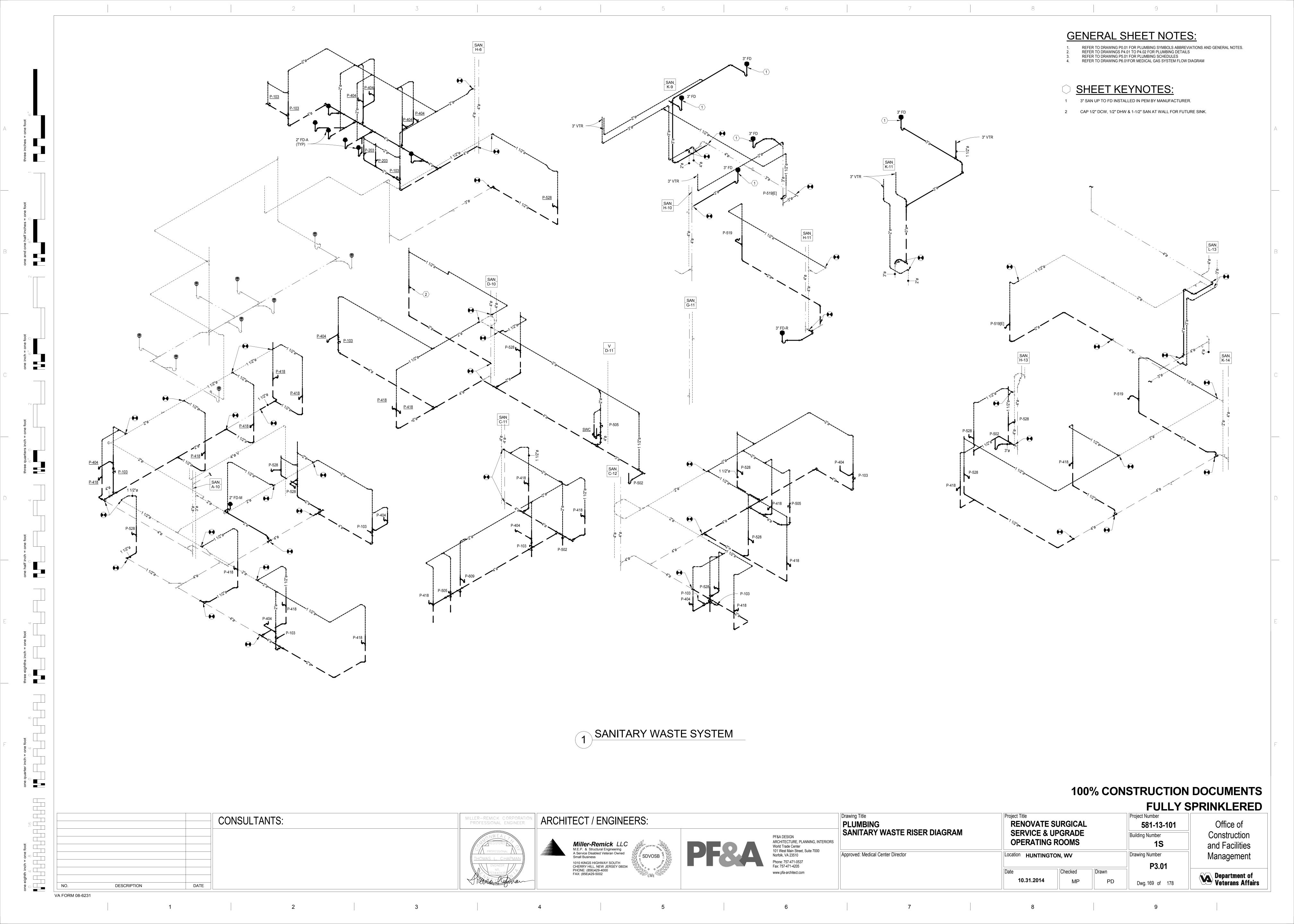


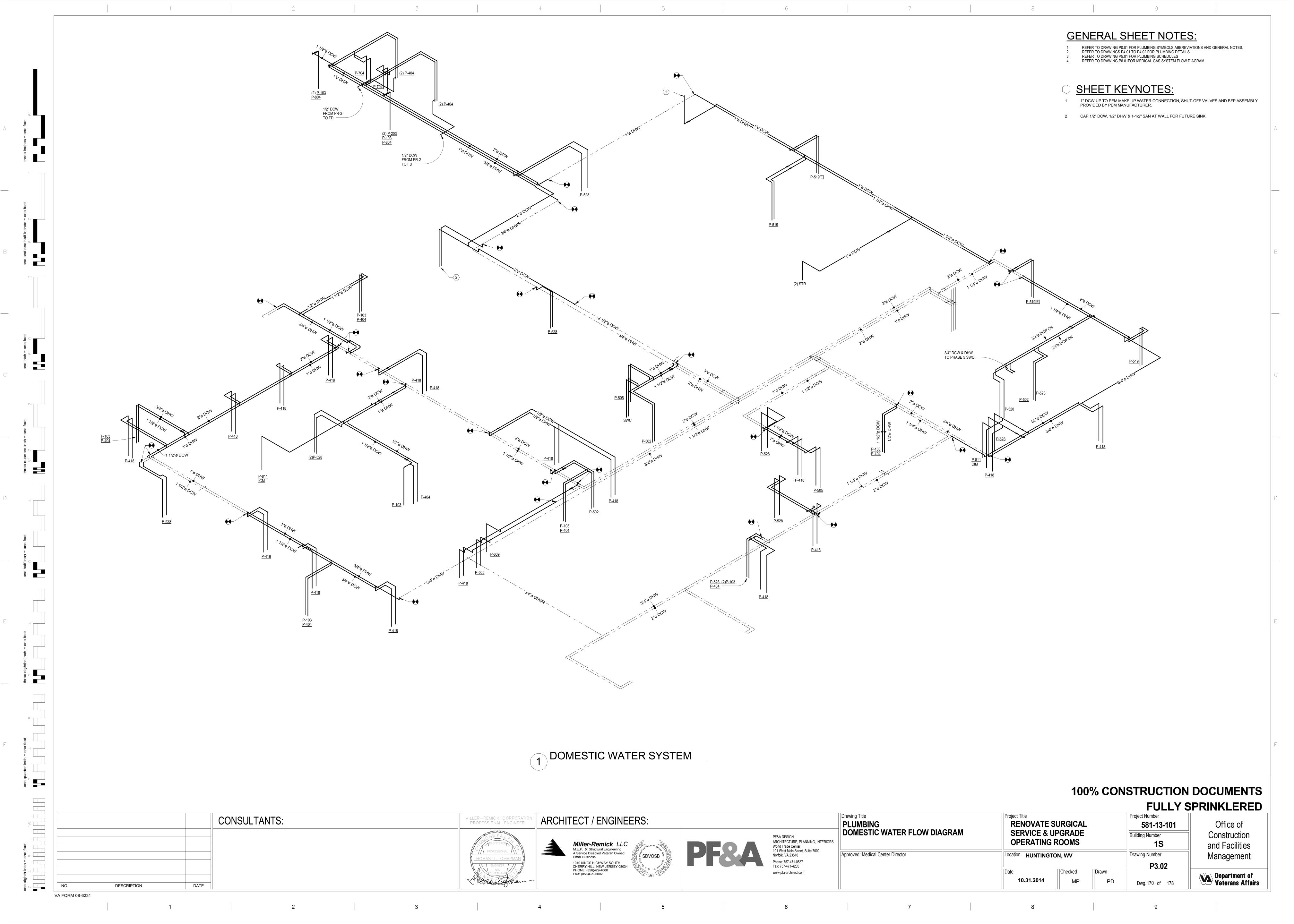
KEYPLAN N.T.S.

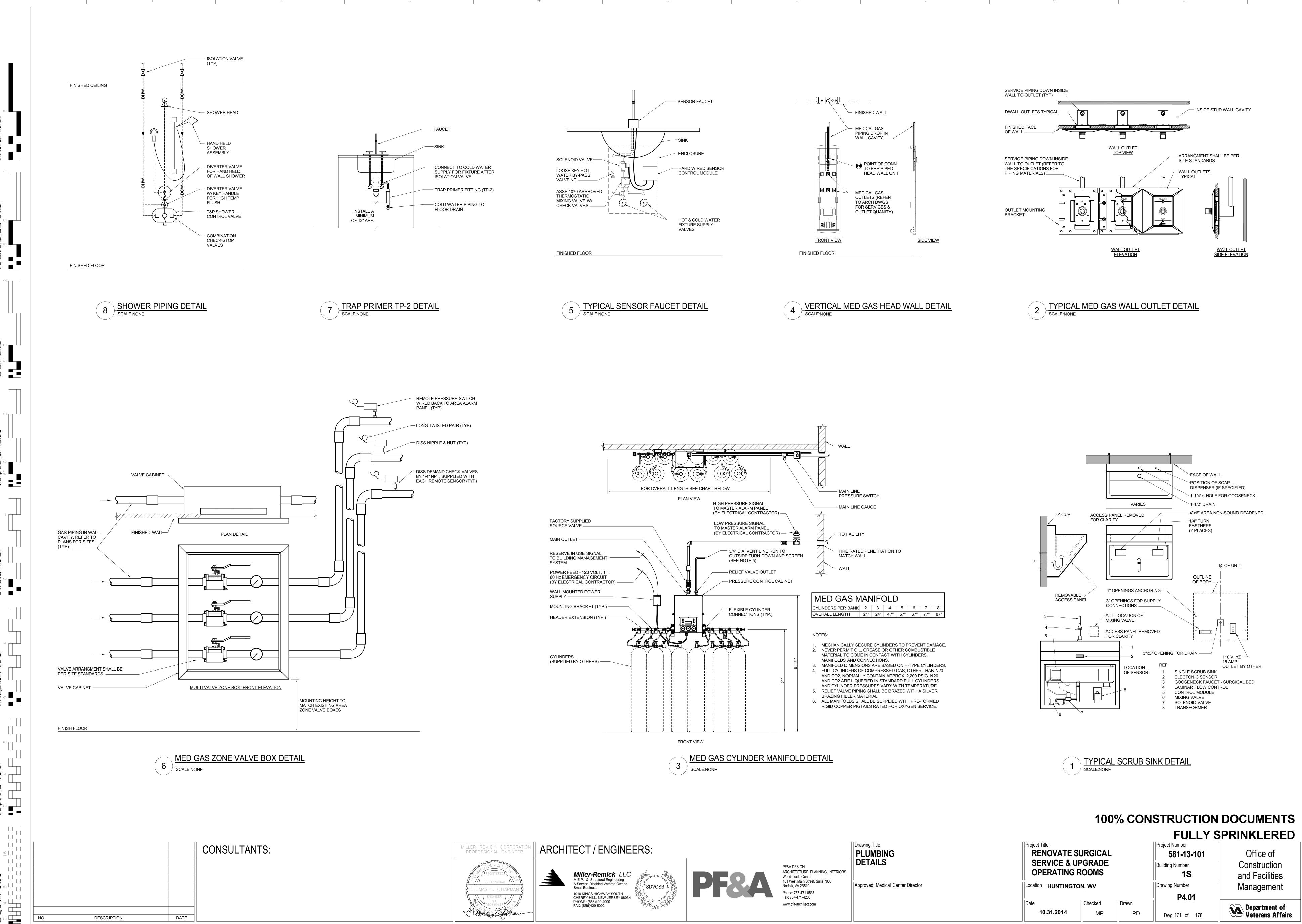
100% CONSTRUCTION DOCUMENTS FULLY SPRINKLERED

Drawing Title Project Title Project Number MILLER-REMICK CORPORAT PROFESSIONAL ENGINEER CONSULTANTS: ARCHITECT / ENGINEERS: **RENOVATE SURGICAL** PLUMBING Office of 581-13-101 **SERVICE & UPGRADE** PHASE 4 - 3RD FLOOR AREA B - NEW WORK Construction **Building Number** PF&A DESIGN ARCHITECTURE, PLANNING, INTERIORS
World Trade Center
101 West Main Street, Suite 7000 **OPERATING ROOMS** Miller-Remick LLC
M.E.P. & Structural Engineering
A Service Disabled Veteran Owned 18 and Facilities Approved: Medical Center Director Location HUNTINGTON, WV Drawing Number Management ្តី SDVOSB ថ្មី Norfolk, VA 23510 Phone: 757-471-0537 Fax: 757-471-4205 1010 KINGS HIGHWAY SOUTH CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 P4-PP1.02 Checked www.pfa-architect.com Department of Veterans Affairs FAX: (856)429-5002 10.31.2014 MP PD Dwg. 168 of 178 DATE DESCRIPTION

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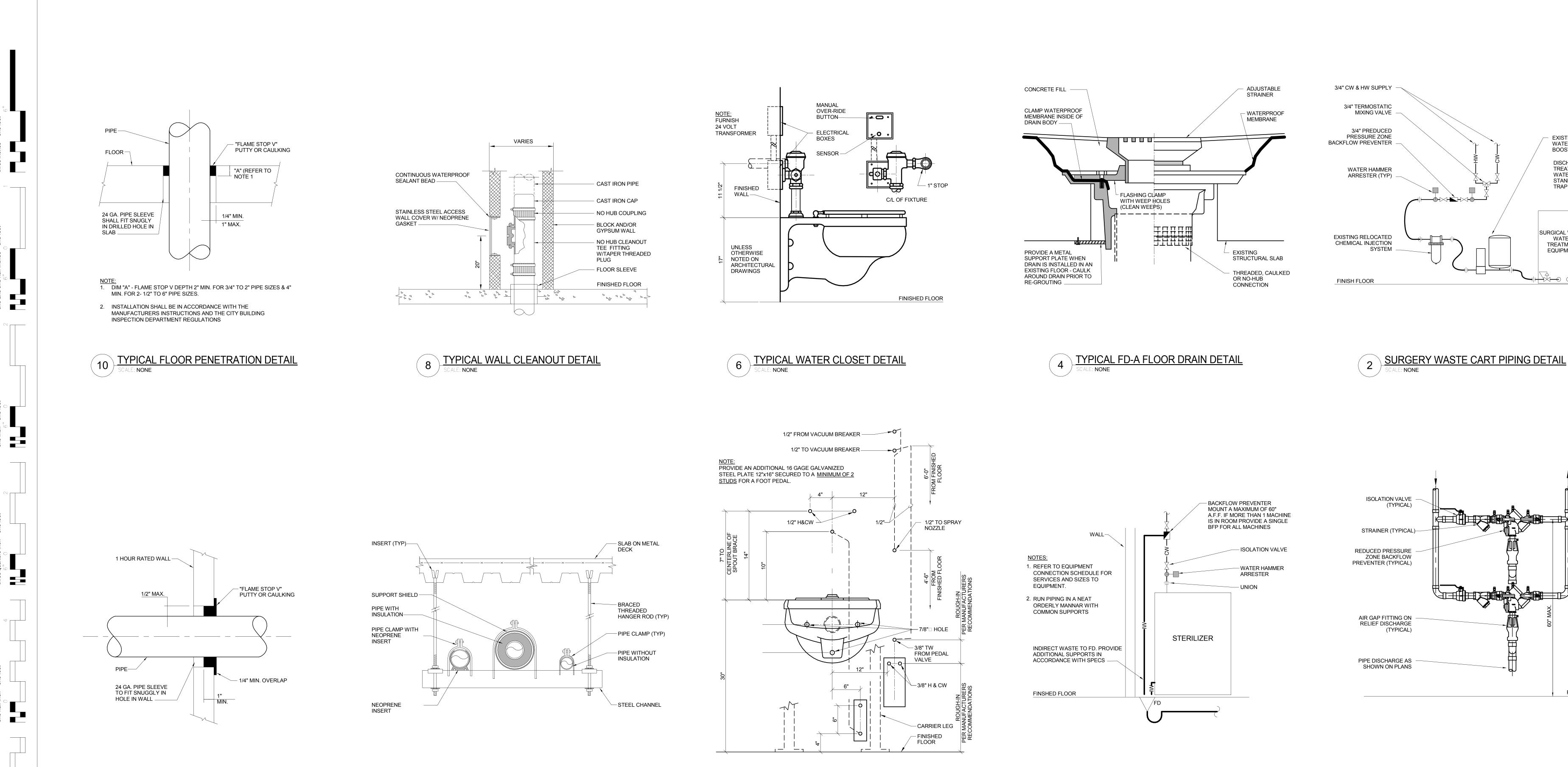




DESCRIPTION

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VA FORM 08-6231



TYPICAL TRAPEZE PIPE SUPPORT DETAIL

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TYPICAL WALL PENETRATION DETAIL

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VA FORM 08-6231

TYPICAL BACKFLOW PREVENTER PIPING DETAIL

EXISTING RELOCATED

WATER PRESSURE BOOSTER SYSTEM

WATER INTO 2" PVC

STANDPIPE DRAIN,

TRAP & TRAP ARM

DISCHARGE TREATED WASTE

SURGICAL WASTI

WATER

TREATMENT

EQUIPMENT

FLOOR

100% CONSTRUCTION DOCUMENTS FULLY SPRINKLERED Drawing Title Project Title Project Number CONSULTANTS: ARCHITECT / ENGINEERS: MILLER-REMICK CORPORA PLUMBING **RENOVATE SURGICAL** Office of 581-13-101 DETAILS **SERVICE & UPGRADE** Construction **Building Number** PF&A DESIGN **OPERATING ROOMS** ARCHITECTURE, PLANNING, INTERIORS Miller-Remick LLC M.E.P. & Structural Engineering A Service Disabled Veteran Owned **1S** and Facilities World Trade Center 101 West Main Street, Suite 7000 Drawing Number Approved: Medical Center Director Location HUNTINGTON, WV Management ្តី SDVOSB ថ្មី Norfolk, VA 23510 Phone: 757-471-0537 Fax: 757-471-4205 1010 KINGS HIGHWAY SOUTH P4.02 CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 Checked www.pfa-architect.com Department of Veterans Affairs FAX: (856)429-5002 MP PD Dwg.172 of 178 DATE DESCRIPTION

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TYPICAL CLINIC SINK ROUGH-IN DETAIL

TYPICAL STERILIZER PIPING DETAIL

MARK	DESCRIPTION	WASTE PIPE	VENT PIPE	COLD WATER	HOT WATER	WASTE FIXTURE	WATER FIXTURE	WRIST BLADE	ELECTRIC	REMARKS
	32301 (III 1731)	IN	IN	IN	IN	UNITS	UNITS	HANDLES	SENSOR	
P-103	WATER CLOSET	4	2	1.25		6	10	N/A	YES	WALL HUNG
P-203	URINAL	2	1.5	.75		2	3	N/A	YES	WALL HUNG
P-404	LAVATORY	1.5	1.5	.5	.5	1	1	NO	YES	BOWL INTIGRAL W/ COUNTERTOP
P-418	LAVATORY	1.5	1.5	.5	.5	1	1	NO	YES	WALL HUNG
P-502	SERVICE SINK	3	1.5	.75	.75	2	4	NO	NO	FLOOR MOUNTED
P-505	CLINIC SINK	4	2	1	1	5	4	N/A	NO	REFER TO DETAIL 5/P4.02
P-519	SCRUB SINK	1.5	1.5	.75	.75	3	2	NO	YES	REFER TO DETAIL 1/P4.01
P-519[E]	SCRUB SINK (RELOCATED)	1.5	1.5	.75	.75	3	2	NO	YES	EXISTING RELOCATED, REFER TO DETAIL 1/P4.01
P-528	SINK	2	1.5	.75	.75	3	2	YES	NO	UNDERMOUNTED, STAINLESS STEEL
P-609	ELEC WATER COOLER	1.5	1.5	.5		.5	1	N/A	NO	DUEL HEIGHT
P-704	SHOWER	2	1.5	.5	.5	2	2	N/A	NO	PROVIDE MIXING VALVE BY-PASS FOR SYSTEM SANITIZATION FLUSH
P-710	EMERGENCY EYE WASH			.5				N/A	NO	
P-804	HOSE BIBB			.75				N/A	NO	
P-811	ICE MACHINE BOX			.5				N/A	NO	

						EQUI	PIVIENT COL	NECTION SO	JIEDULE							
MARK	LOCATION	SYSTEM AND/OR	EQUIPMENT	WASTE PIPE	VENT PIPE	COLD WATER	HOT WATER	MEDICAL AIR	VACUUM	EVAC VACUUM	OXYGEN	NITROGEN	NITROS OXIDE	CARBON DIOXIDE	OTHER	REMARKS
		SERVICE	DESCRIPTION	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	IN	
AC	OR'S AND PAIN MANEGEMENT	MEDICAL GASES	ANESTHESIA COLUMN	NA	NA	NA	NA	.5	.75	.75	.5	-	.5	-	-	
SC	OR'S	MEDICAL GASES	SURGICAL COLUMN	NA	NA	NA	NA	.5	.75	.75	.5	-	.5	NA	-	EXISTING TO BE RELOCATED
SWC	INFECTIOUS FLUID MGT		MED WASTE TREATMENT	2	-	.75	.75	NA	NA	NA	NA	NA	NA	NA	-	EXISTING TO BE RELOCATED
STR	CLEAN CORE		STERILIZER	1-1/2	-	.75	-	MA	NA	NA	NA	NA	NA	NA	-	EXISTING TO BE RELOCATED
HDW	PATIANT BEDS	MEDICAL GASES	HEAD WALL	NA	NA	NA	NA	.5	.75	-	.5	-	-	-	-	
CIM	PACU		ICE MACHINE	.5 INDIRECT	-	.5	-	NA	NA	NA	NA	NA	NA	NA	-	CONTERTOP UNIT, PROVIDE BFP
ICM	PRE-OPT		ICE MACHINE	1 INDIRECT	-	.5	-	NA	NA	NA	NA	NA	NA	NA	-	EXISTING RELOCATED, PROVIDE B

MARK	LOCATION	TYPE OF PANEL	GAGES	SERVICE INDICATOR LIGHTS
SGA	SURGERY CONTROL ROOM	AREA ALARM PANEL	YES	OXYGEN LINE PRESSURE ABNORMAL NITROUS OXIDE LINE PRESSURE ABNORMAL NITROGEN LINE PRESSURE ABNORMAL MEDICAL AIR LINE PRESSURE ABNORMAL MEDICAL VACUUM LINE VACUUM LOW TEST BUTTON
AGA	RECOVERY ROOMS (PACU) PRE-OP PAIN MANAGEMENT	AREA (ZONE) ALARM PANEL	YES	OXYGEN LINE PRESSURE ABNORMAL MEDICAL AIR LINE PRESSURE ABNORMAL MEDICAL VACUUM LINE VACUUM LOW TEST BUTTON

100% CONSTRUCTION DOCUMENTS FULLY SPRINKLERED

									FULLY :	SPRINKLERED
		CONSULTANTS:	MILLER-REMICK CORPORATION PROFESSIONAL ENGINEER	ARCHITECT / ENGINEERS:		PLUMBING	Project Title RENOVATE S	SURGICAL	Project Number 581-13-101	Office of
			MW E A /	Miller-Remick LLC	PF&A DESIGN ARCHITECTURE, PLANNING, INTERIORS World Trade Center	SCHEDULES	SERVICE & U OPERATING		Building Number 1S	Construction and Facilities
			PROFESSIONAL THOMAS L. CHAPMAN	M.E.P. & Structural Engineering A Service Disabled Veteran Owned Small Business 1010 KINGS HIGHWAY SOUTH	101 West Main Street, Suite 7000 Norfolk, VA 23510	Approved: Medical Center Director	Location HUNTINGT	ON, WV	Drawing Number	Management
			ENGINEER NO. PEO44043R	CHERRY HILL, NEW JERSEY 08034 PHONE: (856)429-4000 FAX: (856)429-5002	Phone: 757-471-0537 Fax: 757-471-4205 www.pfa-architect.com		Date 10.31.2014	Checked Drawn	P5.01	Department of
NO. DESC VA FORM 08-6231	CRIPTION DATE		1 Portugues of the second				10.31.2014	MP	Dwg. 173 of 178	Veterans Affairs

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